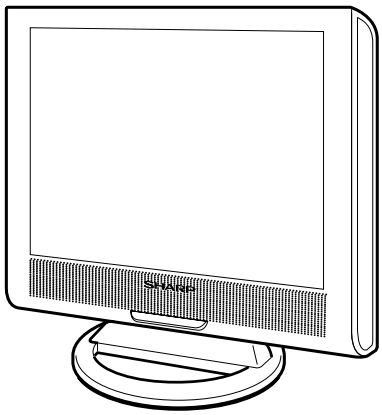
230-90413.917

LOEWE. SERVICE MANUAL



LCD COLOUR TELEVISION

Art. Nr. 60415 A60

MODEL # FL38 (LC-15A2L)

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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Ersatzteileliste für Artikel : 60415A60

SPARE PART LIST

Änderungen und Liefermöglichkeiten vorbehalten !

Loewe FL38

LOEWE.

POSNR. / ITEMNMB	KURZTEXT / DESCRIPTION	BESTELLNR. / LIST-PART-NMB	ENTF-DAT. / LAST-DATE
	BAUGRUPPEN	**UNITS**	
U 0001	FRONTEND LCD TV KPL. LOEWE	PRINT.CIRCUIT BOARD	396-88028050T
U 0002	HAUPTLEITERPLATTE	PRINT.CIRCUIT BOARD	396-90353980
U 0003	BEDIENTEILPLATTE	PRINT.CIRCUIT BOARD	396-90353990
U 0003	ANZEIGEPLATTE	PRINT.CIRCUIT BOARD	396-90354910
U1001	SCART-ADAPTER KPL.	PRINT.CIRCUIT BOARD	396-88038050
U1002	TUNER-ZF M MULTISYSTEM MN/BG-DK	TUNER	260-87271050T
	DRUCKSACHEN	**OPERATING INSTRUCTIONS**	
N 0001	BAN D-I FL38 LCD-TV E3001	OPERATING INSTRUCT.	233-29035
N 0001	BAN NL-F FL38 LCD-TV E3001	OPERATING INSTRUCT.	233-29035010
N 0001	BAN GB-E FL38 LCD-TV E3001	OPERATING INSTRUCT.	233-29035020
	GERÄTEBEIPACK	**SET SUPPLEMENT**	
N 1002	NETZKABEL FL38	POWER CORD	170-90354980
U 0004	NETZTEIL	POWER PACK	815-90354990
U 9111	IR-FERNBEDIENUNG CONTROL 150 TV ARKTIS	TRANSMITTER	263-87000060
	VERPACKUNGSMATERIAL	**PACKING MATERIAL**	
J 0001	VERPACKUNGSKARTON	PACKING CASE	245-90355900
J 0002	PAPPEINLAGESATZ OBEN+UNTEN MIT POLSTER	CUSHION-SET	252-90355901
J 0003	PAPPEINLAGESATZ SEITENTEILE	CUSHION-SET	252-90355902
J 0004	PAPPEINLAGE 660 X 190 MM	CUSHION-SET	252-90355903
	KNÖPFE	**BUTTONS**	
2-3	BEDIENTASTENLEISTE	BUTTON	682-90354976
27	KNOPF EIN/AUS	BUTTON	682-90355907
	GEHÄUSETEILE	**CABINET MOUNTING**	
1	FRONTRAHMEN KPL.	MASK	704-90354981
1-16	LAUTSPRECHER HT FRONT	LOUDSPEAKER	272-90354973
1-2	LED-SCHACHT	COVER	568-90354978
1-3	ABDECKUNG LÄNGLICH SCHWARZ	MASK	703-90354983
1-4	IR-FILTER-FENSTER 12X8 MM	WINDOW	666-90354977
2	RUECKWAND KOMPLETT	BACKCOVER	775-90354982
3-1	ABDECKUNG SELBSTKLEBEND SCHW. SCHLITZ	COVER	568-90354986
3-2	SCHAUMGUMMI F. FUSSRING GEBOGEN 10 CM	COVER	568-90354987
3-3	BODENPLATTE FUSSRING	BOTTOM COVER	777-90354988
3-4	ABDECKUNG	COVER	568-90354985
G 0002	ABDECKUNG FUSS LCD	STAND	484-88109001
	SPULEN/LAUTSPRECHER	**COILS,SPEAKERS**	
2-13	LAUTSPRECHER TT RUECKWAND	LOUDSPEAKER	272-90354975
T701	TRAFO	POWER TRANSFORMER	490-90354959
T751	TRAFO	POWER TRANSFORMER	490-90354960
T752	TRAFO	POWER TRANSFORMER	490-90354960
	INTEGR.SCHALTUNGEN	**INTEGRATED CIRCUITS**	
I1001	ICMOS 4,50V 20MA SO08 RESET-IC LV030	INTEGRATED CIRCUIT	350-28570
I1002	ICMOS 24C32 LCD-TV PROGR. L100 LOEWE	INTEGRATED CIRCUIT	349-90578100
I1003	ICMOS M27C2001-10 L3001 V1.0	INTEGRATED CIRCUIT	349-28565438 25.10.2000
I1003	ICMOS M27C2001-10 L3001 V1.1	INTEGRATED CIRCUIT	349-28565443 08.11.2000
I1003	ICMOS M27C2001-10 L3001 V1.2	INTEGRATED CIRCUIT	349-28565451

I1003	ICMOS M27C2001-10 L3001 V1.3	INTEGRATED CIRCUIT	349-28565460
I1004	IC TEA5114A	INTEGRATED CIRCUIT	349-15212
I1005	IC VOLT.REGULAT TO252 9V OA5 LV030	INTEGRATED CIRCUIT	350-29008
I1006	ICMOS S-RAM W24257 AS-35 LV030	INTEGRATED CIRCUIT	350-28569
I1008	ICMOS 74V1T00S SOT-23-5L NAND LV030	INTEGRATED CIRCUIT	350-28563
I1009	IC ST92R195 QFP80 28844S LV030	INTEGRATED CIRCUIT	350-28844
I1010	IC VOLT.REGULAT TO252 5V OA5 LV030	INTEGRATED CIRCUIT	350-29006
I1011	IC VOLT.REGULAT TO252 10V OA5 LV030	INTEGRATED CIRCUIT	350-29007
I1012	ICMOS 74 HCT125 SMD LV030	INTEGRATED CIRCUIT	350-15523
I1013	IC TEA5114A	INTEGRATED CIRCUIT	349-15212
I4500	IC TDA5637 SOT340	INTEGRATED CIRCUIT	350-27278
I4600	IC TSA5523M SOT266	INTEGRATED CIRCUIT	350-27275
I4800	IC TDA9818 SDIP24	INTEGRATED CIRCUIT	349-27276
I4800	IC TDA9818 TS-SSOP24	INTEGRATED CIRCUIT	350-28463
IC1101	ICMOS MB88346BPFV	INTEGRATED CIRCUIT	350-90354921
IC1102	ICMOS NJM4565V	INTEGRATED CIRCUIT	350-90354922
IC1103	ICMOS NJM4565V	INTEGRATED CIRCUIT	350-90354922
IC1104	ICMOS NJM4565V	INTEGRATED CIRCUIT	350-90354922
IC1105	ICMOS BU4053BCFV-E2	INTEGRATED CIRCUIT	350-90354923
IC1106	ICMOS NJM4580V	INTEGRATED CIRCUIT	350-90354924
IC1107	ICMOS NJM4580V	INTEGRATED CIRCUIT	350-90354924
IC1108	ICMOS NJM4580V	INTEGRATED CIRCUIT	350-90354924
IC1109	ICMOS NJM353M	INTEGRATED CIRCUIT	350-90354925
IC1110	ICMOS BU4053BCFV-E2	INTEGRATED CIRCUIT	350-90354923
IC1201	ICMOS LR38797	INTEGRATED CIRCUIT	350-90354926
IC1202	ICMOS UPD485505G-25	INTEGRATED CIRCUIT	350-90354927
IC2001	ICMOS RH-IX3483CEN1	INTEGRATED CIRCUIT	350-90354928
IC2002	ICMOS PST529DMT	INTEGRATED CIRCUIT	350-90354929
IC2003	ICMOS TC4W66F	INTEGRATED CIRCUIT	350-90354930
IC2004	ICMOS BR24C08F-E2	INTEGRATED CIRCUIT	350-90354931
IC2005	ICMOS BA7046F	INTEGRATED CIRCUIT	350-90354932
IC201	ICMOS NJM2147M-TE1	INTEGRATED CIRCUIT	350-90354912
IC301	IC LA4227	INTEGRATED CIRCUIT	349-90354911
IC302	IC LA4227	INTEGRATED CIRCUIT	349-90354911
IC303	ICMOS NJM2283M	INTEGRATED CIRCUIT	350-90354913
IC402	ICMOS NJM2235M	INTEGRATED CIRCUIT	350-90354914
IC701	ICMOS AN8005M	INTEGRATED CIRCUIT	350-90354915
IC702	ICMOS NJM2377M	INTEGRATED CIRCUIT	350-90354916
IC704	ICMOS BA033FP-E2	INTEGRATED CIRCUIT	350-90354917
IC802	ICMOS VPC3230D-QA-B2	INTEGRATED CIRCUIT	350-90354918
IC901	ICMOS MSP3410G-QA-B5	INTEGRATED CIRCUIT	350-90354919
IC902	ICMOS NJM4560M	INTEGRATED CIRCUIT	350-90354920
IC903	ICMOS NJM4560M	INTEGRATED CIRCUIT	350-90354920
RMC4101	INFRAROT-EMPFAENGER	INTEGRATED CIRCUIT	349-90354972

BUCHSEN/FASSUNGEN — SOCKETS

H1002	IC-FASSUNG 8-POL.	SOCKET	320-80503
H1003	IC-FASSUNG 32-POL.	SOCKET	320-22087
W1001	SCARTBUCHSE	SOCKET	323-19542
W1003	CHINCH-BUCHSE ROT 8MM GOLDPLATTIERT	SOCKET	323-29010
W1004	MINI-DIN-BUCHSE 4-POL	SOCKET	323-18108
W1005	CHINCH-BUCHSE WEISS 8MM GOLDPLATTIERT	SOCKET	323-29011
W1006	CHINCH-BUCHSE GELB 8MM GOLDPLATTIERT	SOCKET	323-29009
W1010	CHINCH-BUCHSE WEISS 8MM GOLDPLATTIERT	SOCKET	323-29011
W1011	CHINCH-BUCHSE ROT 8MM GOLDPLATTIERT	SOCKET	323-29010
W1016	KOPFHOERERBUCHSE 3,5MM	SOCKET	323-24591

W1017	EINBAUBUCHSE 10-POL QUADRAT.	SOCKET	323-28932
	DIODEN	**DIODES**	
D4203	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4204	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4222	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4241	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4242	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4303	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4304	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4322	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4341	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4403	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4422	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4441	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4508	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4527	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4551	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4806	DIODE BAV 99W SOT323	DIODE	351-27469
	QUARZE/FILTER	**QUARTZES**	
X1001	QUARZ 4,000000 MHZ HC49U	CRYSTAL OSCILLATOR	385-17297Y06
X2002	PIEZO	CERAMIC FILTER	386-90354954
X4651	QUARZ 4,000000 MHZ HC49U3 LOW PROFILE	CRYSTAL OSCILLATOR	385-27752
X4701	FILT. OFW K 6263 K	FILTER	290-25214
X801	QUARZ SC0012CEZZ	CRYSTAL OSCILLATOR	385-90354952
X901	QUARZ SB0250GEZZ	CRYSTAL OSCILLATOR	385-90354953
	SCHALTER	**SWITCHES**	
S4701	SCHIEBESCHALTER	SWITCH	469-90354969
SW4002	SCHALTER	SWITCH	467-90354968
SW4003	SCHALTER	SWITCH	467-90354968
SW4004	SCHALTER	SWITCH	467-90354968
SW4006	SCHALTER	SWITCH	467-90354968
SW4007	SCHALTER	SWITCH	467-90354968
SW4008	SCHALTER	SWITCH	467-90354968
	SICHERUNGEN	**FUSES**	
F1001	SICH. 2000MA T 250V 8X8 LV380-3	FUSE	380-16779020
F1002	SICH. 1600MA T 250V 8X8 LV380-3	FUSE	380-16913020
F1003	SICH. 1600MA T 250V 8X8 LV380-3	FUSE	380-16913020
F1004	SICH. 315MA T 250V 8X8 LV380-3	FUSE	380-10558020
	SMD TEILE	**SMD PARTS**	
D1001	DIOZD 5V6 J 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-16758
D1002	DIOZD 5V6 G 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-22580
D1003	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532
D1004	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532
D1005	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532
D1006	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532
D1007	DIOZD 5V6 G 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-22580
D1008	DIOZD 5V6 G 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-22580
D1009	DIOZD 5V6 J 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-16758
D1010	DIODE 0,2A 75V SOD80 LL4148 LV030	DIODE	351-15015
D1011	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532
D1012	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532
D1013	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532

D1101	DIODE 1SS250-1E		DIODE	351-90354948	
D1201	DIODE DAN222-1		DIODE	351-90354946	
D1202	DIODE ZD EX0227CEZZ		DIODE	351-90354951	
D201	DIODE DAN222-1		DIODE	351-90354946	
D4009	DIODE ZD EX0879CEZZ		DIODE	351-90354966	
D4010	DIODE ZD EX0879CEZZ		DIODE	351-90354966	
D4018	DIODE ZD EX1283CEZZ		DIODE	351-90354967	
D4019	DIODE ZD EX1283CEZZ		DIODE	351-90354967	
D4120	DIODE ZD EX1271CEZZ		DIODE	351-90354971	
D4121	DIODE ZD EX1271CEZZ		DIODE	351-90354971	
D4702	DIODE BA 592 SOD323		DIODE	351-25810	
D4703	DIODE BA 592 SOD323		DIODE	351-25810	
D4751	DIODE BA 592 SOD323		DIODE	351-25810	
D4752	DIODE BA 592 SOD323		DIODE	351-25810	
D4771	DIODE BA 592 SOD323		DIODE	351-25810	
D4772	DIODE BA 592 SOD323		DIODE	351-25810	
D4781	DIODE BA 592 SOD323		DIODE	351-25810	
D4832	DIODE BA 592 SOD323		DIODE	351-25810	
D702	DIODE SFPB56-2E		DIODE	351-90354947	
D703	DIODE 1SS250-1E		DIODE	351-90354948	
D704	DIODE 1SS250-1E		DIODE	351-90354948	
D705	DIODE DAN222-1		DIODE	351-90354946	
D706	DIODE SFPB74-2E		DIODE	351-90354949	
D707	DIODE DAN222-1		DIODE	351-90354946	
D709	DIODE DAN222-1		DIODE	351-90354946	
D710	DIODE DAN222-1		DIODE	351-90354946	
D712	DIODE DAN222-1		DIODE	351-90354946	
D753	DIODE IMN10-1		DIODE	351-90354950	
D754	DIODE IMN10-1		DIODE	351-90354950	
Q1001	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1003	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1004	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1005	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1006	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1007	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1008	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1009	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1010	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1011	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1012	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1013	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1014	TRANS BC857B SOT23		TRANSISTOR	344-14979	
Q1015	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1016	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1017	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1018	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1019	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1020	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1021	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1022	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1023	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1024	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1025	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1026	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1027	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1028	TRANS BC847BW SOT323		TRANSISTOR	344-27272	

Q1029	TRANS BCX69-25		TRANSISTOR	344-24714	
Q1030	TRANS BF 840 SMD		TRANSISTOR	344-28018	
Q1031	TRANS BF550 SOT23		TRANSISTOR	344-23563	
Q1032	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1033	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1101	TRANS 2SA1729-1		TRANSISTOR	344-90354943	
Q1102	TRANS 2SC4520-1		TRANSISTOR	344-90354944	
Q1201	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q2003	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q2004	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q2005	TRANS DTA144EE-1		TRANSISTOR	344-90354945	
Q2006	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q201	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q202	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q203	TRANS FMY3/////-1		TRANSISTOR	344-90354934	
Q204	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q302	TRANS 2SA1162Y-1		TRANSISTOR	344-90354935	
Q303	TRANS DTC314TK-1		TRANSISTOR	344-90354936	
Q304	TRANS DTC314TK-1		TRANSISTOR	344-90354936	
Q305	TRANS DTC314TK-1		TRANSISTOR	344-90354936	
Q308	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q4106	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q4107	TRANSISTOR UMG4/////-1		TRANSISTOR	344-90354970	
Q4702	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+		TRANSISTOR	344-27270	
Q4709	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+		TRANSISTOR	344-27270	
Q4752	TRANS DIGITAL SOT323 NPN 50V 100MA 47K		TRANSISTOR	344-28555	31.12.1999
Q4754	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+		TRANSISTOR	344-27270	
Q4772	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+		TRANSISTOR	344-27270	
Q4772	TRANS DIGITAL SOT323 NPN 50V 100MA 47K		TRANSISTOR	344-28555	
Q4774	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+		TRANSISTOR	344-27270	
Q4804	TRANS BC857W SOT323		TRANSISTOR	344-27468	
Q4804	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q4832	TRANS BCR198W SOT323 PNP		TRANSISTOR	344-27269	
Q4833	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q701	TRANS 2SA1162Y-1		TRANSISTOR	344-90354935	
Q702	TRANS 2SK2503-1		TRANSISTOR	344-90354938	
Q703	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q707	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q708	TRANS FMMT718-1		TRANSISTOR	344-90354939	
Q709	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q710	TRANS 2SA1162Y-1		TRANSISTOR	344-90354935	
Q751	TRANS FZT1053A-1		TRANSISTOR	344-90354940	
Q752	TRANS FZT1053A-1		TRANSISTOR	344-90354940	
Q753	TRANS 2SA1162Y-1		TRANSISTOR	344-90354935	
Q754	TRANS DTC114YE-1		TRANSISTOR	344-90354941	
Q757	TRANS UPA606T-1		TRANSISTOR	344-90354942	

	SPEZIALTEILE	**SPECIAL PARTS**		
10	FILT. OFW K 9463 M	FILTER	290-25323	
20	DECKEL	LID	501-87236011	
21	DECKEL	LID	501-87236011	
21	KABLBAUM DISPLAY	CONNECTING CABLE	171-90355905	
2-12	SCHAUMGUMMI	FRAME	549-90354989	
22	15" LCD-PANEL	PICTURE TUBE	345-90354999	
2-2	RUECKWANDAUFKLEBER	FRAME	549-90354979	
25	TYPENSCHILD	INDICATING UNIT	663-90354991	

26	BUCHSEN/KABELABDECKUNG F.RUECKWAND	COVER	568-90355906	
36	KABELBAUM 4-POL.	CONNECTING CABLE	171-90354995	
37	KABELBAUM 20-POL.	CONNECTING CABLE	171-90354997	
38	KABELBAUM 50-POL.	CONNECTING CABLE	171-90354994	
39	KABELBAUM 5-POL.	CONNECTING CABLE	171-90354993	
4	LAMPEN-SET	INCANDESCENT LAMP	383-90354998	
40	KABELBAUM 11-POL.	CONNECTING CABLE	171-90354992	
FB1202	SPULE	CHOKE	296-90354964	
FB1203	SPULE	CHOKE	296-90354965	
FB702	SPULE	CHOKE	296-90354961	
FB703	SPULE	CHOKE	296-90354961	
FB704	SPULE	CHOKE	296-90354961	
FB705	SPULE	CHOKE	296-90354962	
FB706	SPULE	CHOKE	296-90354961	
FB708	SPULE	CHOKE	296-90354962	
FB709	SPULE	CHOKE	296-90354963	
L4192	LUFTSPULE	COIL	297-27573	18.07.2000
L4192	SPULE	COIL	297-27573001	15.01.1999
L4192	DR. 270N J 0603 SMD LV030 +	CHOKE	296-28579	
L4193	LUFTSPULE	COIL	297-27571	
L4201	LUFTSPULE	COIL	297-27571	
L4201	SPULE	COIL	297-27571001	
L4202	LUFTSPULE	COIL	297-28046	21.09.2000
L4202	DR-CH 330N0 J 0805 LL2012 LV030	CHOKE	296-29271	
L4231	SPULE	COIL	297-27569001	
L4232	SPULE	COIL	297-27569001	
L4233	SPULE	COIL	297-27561001	
L4301	SPULE	COIL	297-27562001	
L4301	SPULE	COIL	297-27566001	02.05.2001
L4302	SPULE	COIL	297-27561001	02.05.2001
L4302	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	09.05.2001
L4303	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	
L4311	LUFTSPULE	COIL	297-27571	
L4331	SPULE	COIL	297-27561001	
L4332	SPULE	COIL	297-27683001	
L4342	SPULE	COIL	297-27553001	02.05.2001
L4342	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	09.05.2001
L4343	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	
L4351	DR. 68N J 0805 800M-Q30 LV030	CHOKE	296-28465	
L4352	DR. 68N J 0805 800M-Q30 LV030	CHOKE	296-28465	
L4401	SPULE	COIL	297-27562001	
L4402	SPULE	COIL	297-27553001	
L4411	SPULE	COIL	297-27568001	
L4422	SPULE	COIL	297-27559001	
L4431	SPULE LV297-27546	COIL	297-27546001	
L4432	SPULE	COIL	297-27683001	
L4441	SPULE	COIL	297-27561001	02.05.2001
L4441	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	09.05.2001
L4442	SPULE	COIL	297-27683001	02.05.2001
L4442	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	09.05.2001
L4443	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	
L4444	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	
L4451	DR. 12N K 0805 800M-Q45 LV030	CHOKE	296-28466	
L4452	DR. 12N K 0805 800M-Q45 LV030	CHOKE	296-28466	
L4503	SPULE	COIL	297-27564001	
L4523	SPULE	COIL	297-27552001	

POSNR. ITEMNMB	KURZTEXT DESCRIPTION		BESTELLNR. LIST-PART-NMB	ENTF-DAT. LAST-DATE
L4543	SPULE	COIL	297-27548001	
L4546	SPULE	COIL	297-27559001	
L4701	DR-RA 0U68 K 4X3X4 5R0 LV298-21/020	CHOKE	298-27591020	
L4816	SPULE LV297-27743	COIL	297-27743	
L4831	DR-RA 6U8 J 4X3X4 5R0 LV298-21/020	CHOKE	298-27588020	
L701	SPULE	CHOKE	296-90354955	
L705	SPULE	CHOKE	296-90354956	
L706	SPULE	CHOKE	296-90354955	
L751	SPULE	CHOKE	296-90354957	
L752	SPULE	CHOKE	296-90354957	
L804	SPULE	CHOKE	296-90354958	
L805	SPULE	CHOKE	296-90354958	
P4821	POT 10K 6MM KOHLESCHICHT HORIZONT.	POTENTIOMETER	375-27744	
Q4210	TRANS BF1100WR SOT343 +	TRANSISTOR	344-27268	
Q4310	TRANS BF1100WR SOT343 +	TRANSISTOR	344-27268	
Q4410	TRANS BF1100WR SOT343 +	TRANSISTOR	344-27268	
Q4836	TRANS BC847B SOT23	TRANSISTOR	344-14974	
Q4853	TRANS BC847BW SOT323	TRANSISTOR	344-27272	
W1001	FOLIENSTECKVERB. 20-POL RM0,5	CONTACT LEDGE	326-28933	
W1002	STIFTLEISTE 7-POL NATUR LV326-11	CONTACT LEDGE	326-20908	
W1002	KONTAKTLEISTE 21POL RM2,54 LV326-27320	CONTACT LEDGE	326-27320021	
W1007	BUCHSENLEISTE 5POL RM5,08 LV326-28942	CONTACT LEDGE	326-28942005	
W1008	FLACHSTECKER,GEBOGEN" UG 2 " LV	PLUG	321-82232001	
W1009	FOLIENSTECKVERB. 50-POL RM0,5	CONTACT LEDGE	326-28934	
W1012	FLACHSTECKER,GEBOGEN" UG 2 " LV	PLUG	321-82232001	
W1013	STIFTLEISTE 11-POL NATUR RM2,0 SYST.-PH	CONTACT LEDGE	326-28935	
W1014	BUCHSENLEISTE 6POL RM5,08 LV326-28942	CONTACT LEDGE	326-28942006	
W1015	FLACHSTECKER,GEBOGEN" UG 2 " LV	PLUG	321-82232001	
W1018	FLACHSTECKER,GEBOGEN" UG 2 " LV	PLUG	321-82232001	
W4100	KOAX-BUCHSE	SOCKET	323-27599	
W4200	KONTAKTLEISTE 6POL RM5,08 LV326-27320	CONTACT LEDGE	326-27320016	
W4800	KONTAKTLEISTE 4POL RM5,08 LV326-27320	CONTACT LEDGE	326-27320014	
W4800	KONTAKTLEISTE 5POL RM5,08 LV326-27320	CONTACT LEDGE	326-27320015	26.01.2001
X4651	QUARZ 4,000000 MHZ HC49U3 LOW PROFILE	CRYSTAL OSCILLATOR	385-27752	
X4701	FILT. OFW K 6263 K	FILTER	290-25214	
X4751	FILT. OFW K 9463-M	FILTER	290-25323Y20	
X4771	FILT. OFW K 9461-M	FILTER	290-25216Y20	
X4831	PIEZO FILTER 5,5MHZ/5,742MHZ LV020	CERAMIC FILTER	386-27630020	
X4832	PIEZO FILTER 4,5 MHZ LV020	CERAMIC FILTER	386-27305020	

Ersatzteileliste für Artikel : 60415A70

SPARE PART LIST

Änderungen und Liefermöglichkeiten vorbehalten !

FL38 platin VAR.70

LOEWE.

POSNR. / ITEMNMB	KURZTEXT / DESCRIPTION	BESTELLNR. / LIST-PART-NMB	ENTF-DAT. / LAST-DATE
	BAUGRUPPEN	**UNITS**	
U 0001	FRONTEND LCD TV KPL. LOEWE	PRINT.CIRCUIT BOARD	396-88028050T
U 0002	HAUPTLEITERPLATTE	PRINT.CIRCUIT BOARD	396-90414955T
U 0003	BEDIENTEILPLATTE	PRINT.CIRCUIT BOARD	396-90353990
U 0003	ANZEIGEPLATTE	PRINT.CIRCUIT BOARD	396-90354910
U1001	SCART-ADAPTER KPL.	PRINT.CIRCUIT BOARD	396-88038050
U1002	TUNER-ZF M MULTISYSTEM MN/BG-DK	TUNER	260-87271050T
	DRUCKSACHEN	**OPERATING INSTRUCTIONS**	
N 0001	BAN D-I FL38 LCD-TV E3001	OPERATING INSTRUCT.	233-29035
N 0001	BAN NL-F FL38 LCD-TV E3001	OPERATING INSTRUCT.	233-29035010
N 0001	BAN GB-E FL38 LCD-TV E3001	OPERATING INSTRUCT.	233-29035020
	GERÄTEBEIPACK	**SET SUPPLEMENT**	
N 1002	NETZKABEL FL38	POWER CORD	170-90354980
U 0004	NETZTEIL	POWER PACK	815-90354990
U 9111	IR-FERNBEDIENUNG CONTROL 150 TV ARKTIS	TRANSMITTER	263-87000060
	VERPACKUNGSMATERIAL	**PACKING MATERIAL**	
J 0001	VERPACKUNGSKARTON	PACKING CASE	245-90355900
J 0002	PAPPEINLAGESATZ OBEN+UNTEN MIT POLSTER	CUSHION-SET	252-90355901
J 0003	PAPPEINLAGESATZ SEITENTEILE	CUSHION-SET	252-90355902
J 0004	PAPPEINLAGE 660 X 190 MM	CUSHION-SET	252-90355903
	KNÖPFE	**BUTTONS**	
2-3	BEDIENTASTENLEISTE	BUTTON	682-90354976
27	KNOPF EIN/AUS	BUTTON	682-90355907
	GEHÄUSETEILE	**CABINET MOUNTING**	
1	FRONTRAHMEN KPL.	MASK	704-90354981
1-2	LED-SCHACHT	COVER	568-90354978
1-3	ABDECKUNG LÄNGLICH SCHWARZ	MASK	703-90354983
1-4	IR-FILTER-FENSTER 12X8 MM	WINDOW	666-90354977
2	RUECKWAND KOMPLETT	BACKCOVER	775-90414948
22	LCD-PANEL	PICTURE TUBE	345-90414946
26	BUCHSEN/KABELABDECKUNG F.RUECKWAND	COVER	568-90355906
3-4	ABDECKUNG	COVER	568-90354985
G 0002	ABDECKUNG FUSS LCD	STAND	484-88109001
	SPULEN/LAUTSPRECHER	**COILS,SPEAKERS**	
1-16	LAUTSPRECHER HT FRONT	LOUDSPEAKER	272-90354973
2-13	LAUTSPRECHER TT RUECKWAND	LOUDSPEAKER	272-90354975
T701	TRAFO	POWER TRANSFORMER	490-90414945
T751	TRAFO	POWER TRANSFORMER	490-90354960
T752	TRAFO	POWER TRANSFORMER	490-90354960
	INTEGR.SCHALTUNGEN	**INTEGRATED CIRCUITS**	
I 0101	ICMOS PCA84C122AT-216	INTEGRATED CIRCUIT	350-27026
I 0101	ICMOS PCA84C122AT-231	INTEGRATED CIRCUIT	350-27787
I1001	ICMOS 4,50V 20MA SO08 RESET-IC LV030	INTEGRATED CIRCUIT	350-28570
I1002	ICMOS 24C32 LCD-TV PROGR. L100 LOEWE	INTEGRATED CIRCUIT	349-90578100
I1003	ICMOS M27C2001-10 L3001 V1.0	INTEGRATED CIRCUIT	349-28565438 25.10.2000
I1003	ICMOS M27C2001-10 L3001 V1.1	INTEGRATED CIRCUIT	349-28565443 08.11.2000

I1003	ICMOS M27C2001-10 L3001 V1.2	INTEGRATED CIRCUIT	349-28565451
I1003	ICMOS M27C2001-10 L3001 V1.3	INTEGRATED CIRCUIT	349-28565460
I1004	IC TEA5114A	INTEGRATED CIRCUIT	349-15212
I1005	IC VOLT.REGULAT TO252 9V OA5 LV030	INTEGRATED CIRCUIT	350-29008
I1006	ICMOS W24257# SOP20 55N S-RAM LV030	INTEGRATED CIRCUIT	350-28569
I1008	ICMOS 74V1T00S SOT-23-5L NAND LV030	INTEGRATED CIRCUIT	350-28563
I1009	IC ST92R195 QFP80 28844S LV030	INTEGRATED CIRCUIT	350-28844
I1010	IC VOLT.REGULAT TO252 5V OA5 LV030	INTEGRATED CIRCUIT	350-29006
I1011	IC VOLT.REGULAT TO252 10V OA5 LV030	INTEGRATED CIRCUIT	350-29007
I1012	ICMOS 74 HCT125 SMD LV030	INTEGRATED CIRCUIT	350-15523
I1013	IC TEA5114A	INTEGRATED CIRCUIT	349-15212
I4500	IC TDA5637 SOT340	INTEGRATED CIRCUIT	350-27278
I4600	IC TSA5523M SOT266	INTEGRATED CIRCUIT	350-27275
I4800	IC TDA9818 SDIP24	INTEGRATED CIRCUIT	349-27276
I4800	IC TDA9818 TS-SSOP24	INTEGRATED CIRCUIT	350-28463
IC1101	ICMOS MB88346BPFV	INTEGRATED CIRCUIT	350-90354921
IC1102	ICMOS NJM4565V	INTEGRATED CIRCUIT	350-90354922
IC1103	ICMOS NJM4565V	INTEGRATED CIRCUIT	350-90354922
IC1104	ICMOS NJM4565V	INTEGRATED CIRCUIT	350-90354922
IC1105	ICMOS BU4053BCFV-E2	INTEGRATED CIRCUIT	350-90354923
IC1106	ICMOS NJM4580V	INTEGRATED CIRCUIT	350-90354924
IC1107	ICMOS NJM4580V	INTEGRATED CIRCUIT	350-90354924
IC1108	ICMOS NJM4580V	INTEGRATED CIRCUIT	350-90354924
IC1109	ICMOS NJM353M	INTEGRATED CIRCUIT	350-90354925
IC1110	ICMOS BU4053BCFV-E2	INTEGRATED CIRCUIT	350-90354923
IC1201	ICMOS LR38797	INTEGRATED CIRCUIT	350-90354926
IC1202	ICMOS UPD485505G-25	INTEGRATED CIRCUIT	350-90354927
IC1203	VHITC4W53U/-1	INTEGRATED CIRCUIT	350-90414950
IC1204	VHITC4024BF-1	INTEGRATED CIRCUIT	350-90414951
IC1205	VHITC4052BF1E	INTEGRATED CIRCUIT	350-90414952
IC2001	ICMOS RH-IX3483CEN1	INTEGRATED CIRCUIT	350-90354928
IC2002	ICMOS PST529DMT	INTEGRATED CIRCUIT	350-90354929
IC2003	ICMOS TC4W66F	INTEGRATED CIRCUIT	350-90354930
IC2004	ICMOS BR24C08F-E2	INTEGRATED CIRCUIT	350-90354931
IC2005	ICMOS BA7046F	INTEGRATED CIRCUIT	350-90354932
IC201	ICMOS NJM2147M-TE1	INTEGRATED CIRCUIT	350-90354912
IC301	IC LA4227	INTEGRATED CIRCUIT	349-90354911
IC302	IC LA4227	INTEGRATED CIRCUIT	349-90354911
IC303	ICMOS NJM2283M	INTEGRATED CIRCUIT	350-90354913
IC402	ICMOS NJM2235M	INTEGRATED CIRCUIT	350-90354914
IC701	ICMOS AN8005M	INTEGRATED CIRCUIT	350-90354915
IC702	ICMOS NJM2377M	INTEGRATED CIRCUIT	350-90354916
IC704	ICMOS BA033FP-E2	INTEGRATED CIRCUIT	350-90354917
IC802	ICMOS VPC3230D-QA-B2	INTEGRATED CIRCUIT	350-90354918
IC901	ICMOS MSP3410G-QA-B5	INTEGRATED CIRCUIT	350-90354919
IC902	ICMOS NJM4560M	INTEGRATED CIRCUIT	350-90354920
IC903	ICMOS NJM4560M	INTEGRATED CIRCUIT	350-90354920
RMC4101	INFRAROT-EMPFAENGER	INTEGRATED CIRCUIT	349-90354972

	BUCHSEN/FASSUNGEN	**SOCKETS**	
H1002	IC-FASSUNG 8-POL.	SOCKET	320-80503
H1003	IC-FASSUNG 32-POL.	SOCKET	320-22087
W1001	SCARTBUCHSE	SOCKET	323-19542
W1003	CHINCH-BUCHSE ROT 8MM GOLDPLATTIERT	SOCKET	323-29010
W1004	MINI-DIN-BUCHSE 4-POL	SOCKET	323-18108
W1005	CHINCH-BUCHSE WEISS 8MM GOLDPLATTIERT	SOCKET	323-29011

W1006	CHINCH-BUCHSE GELB 8MM GOLDPLATTIERT	SOCKET	323-29009
W1010	CHINCH-BUCHSE WEISS 8MM GOLDPLATTIERT	SOCKET	323-29011
W1011	CHINCH-BUCHSE ROT 8MM GOLDPLATTIERT	SOCKET	323-29010
W1016	KOPFHOERERBUCHSE 3,5MM HORIZ.	SOCKET	323-24591
W1017	EINBAUBUCHSE 10-POL QUADRAT.	SOCKET	323-28932
	DIODEN	**DIODES**	
D 0117	LED LG T679 SMD	COUPLER	353-27021
D 0118	LED LG T679 SMD	COUPLER	353-27021
D 0121	DIODE LED F.D.SFH 4515	COUPLER	353-27024
D4203	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4204	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4222	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4241	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4242	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4303	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4304	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4322	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4341	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4403	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4422	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4441	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4508	DIOVC 0A02 30V SOD323 BB640 LV030	DIODE	351-26568
D4527	DIOVC 0A02 30V SOD323 BB639 LV030	DIODE	351-26571
D4551	DIOVC 0A02 30V SOD323 BB535 LV030	DIODE	351-26570
D4806	DIODE BAV 99W SOT323	DIODE	351-27469
	QUARZE/FILTER	**QUARTZES**	
X1001	QUARZ 4,000000 MHZ HC49U	CRYSTAL OSCILLATOR	385-17297Y06
X2002	PIEZO	CERAMIC FILTER	386-90354954
X4651	QUARZ 4,000000 MHZ HC49U3 LOW PROFILE	CRYSTAL OSCILLATOR	385-27752
X4701	FILT. OFW K 6263 K	FILTER	290-25214
X801	QUARZ SC0012CEZZ	CRYSTAL OSCILLATOR	385-90354952
X901	QUARZ SB0250GEZZ	CRYSTAL OSCILLATOR	385-90354953
	SCHALTER	**SWITCHES**	
S4701	SCHIEBESCHALTER	SWITCH	469-90354969
SW4002	SCHALTER	SWITCH	467-90354968
SW4003	SCHALTER	SWITCH	467-90354968
SW4004	SCHALTER	SWITCH	467-90354968
SW4006	SCHALTER	SWITCH	467-90354968
SW4007	SCHALTER	SWITCH	467-90354968
SW4008	SCHALTER	SWITCH	467-90354968
	SICHERUNGEN	**FUSES**	
F1001	SICH. 2000MA T 250V 8X8 LV380-3	FUSE	380-16779020
F1002	SICH. 1600MA T 250V 8X8 LV380-3	FUSE	380-16913020
F1003	SICH. 1600MA T 250V 8X8 LV380-3	FUSE	380-16913020
F1004	SICH. 315MA T 250V 8X8 LV380-3	FUSE	380-10558020
	GEBER-ERSATZTEILE	**SPARE PARTS FOR TRANSMITTER**	
20	BATTERIEFEDER	SPRING	739-87217001
20	GEHAEUSE-OBERTEIL CONTROL 150 ARKTIS	COVER	756-87265001
25	LICHTLEITER	WINDOW	666-87274001
30	KONTAKTMATTE CONTROL 150	SPRING CONTACT	309-87267001
70	GEHAEUSE-UNTERTEIL ARKTIS	COVER	756-87264001
80	BATTERIEFEDER 2-FACH	SPRING	739-85279001

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90	BATTERIEDECKEL ARKTIS	COVER	756-87215001	
20	BATTERIEFEDER VERGOLDET	SPRING	739-87217002	
D 104	DIODE BAS216 SOD110	DIODE	351-27279	
D 105	DIODE BAS216 SOD110	DIODE	351-27279	13.03.2002
D 117	LED LG T679 SMD	COUPLER	353-27021	
D 118	LED LG T679 SMD	COUPLER	353-27021	
D 121	DIODE LED F.D.SFH 4515	COUPLER	353-27024	
G 0000	BATTERIEDECKEL ARKTIS	COVER	756-87215001	
G 0000	GEHAEUSE-UNTERTEIL ARKTIS	COVER	756-87264001	
G 0000	GEHAEUSE-OBERTEIL CONTROL 150 ARKTIS	COVER	756-87265001	
G 0000	LICHTLEITER	WINDOW	666-87274001	
H 0000	BATTERIEFEDER 2-FACH	SPRING	739-85279001	
H 0000	BATTERIEFEDER	SPRING	739-87217001	
I 101	ICMOS PCA84C122AT-231	INTEGRATED CIRCUIT	350-27787	13.03.2002
I 101	ICMOS HT48CA6 24SOP M-CONTR. V1.0 LV030	INTEGRATED CIRCUIT	350-29859001	
Q 0121	TRANS GENERAL SOT23 PNP 45V 500MA	TRANSISTOR	344-25509	
Q 121	TRANS GENERAL SOT23 PNP 45V 500MA	TRANSISTOR	344-25509	13.03.2002
Q 122	TRANS GENERAL SOT23 PNP 45V 500MA	TRANSISTOR	344-25509	
S 0000	KONTAKTMATTE CONTROL 150	SPRING CONTACT	309-87267001	
X 0111	PIEZO 4,300000 MHZ MELF RESON LV030	CERAMIC FILTER	386-27022	
X 111	PIEZO 4,300000 MHZ MELF RESON LV030	CERAMIC FILTER	386-27022	13.03.2002
X 111	RESON 3,580000 MHZ SMD MIT KOND.	CERAMIC FILTER	386-29931	
	SMD TEILE	**SMD PARTS**		
D 0105	DIODE BAS216 SOD110	DIODE	351-27279	
D1001	DIOZD 5V6 J 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-16758	
D1002	DIOZD 5V6 G 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-22580	
D1003	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1004	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1005	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1006	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1007	DIOZD 5V6 G 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-22580	
D1008	DIOZD 5V6 G 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-22580	
D1009	DIOZD 5V6 J 0W5 SOD-80 ZMM5.6 LV030	DIODE	351-16758	
D1010	DIODE 0,2A 75V SOD80 LL4148 LV030	DIODE	351-15015	
D1011	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1012	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1013	DIOZD 12V0 J 0W5 SOD-80 ZMM12 LV030	DIODE	351-17532	
D1101	DIODE 1SS250-1E	DIODE	351-90354948	
D1102	DIODE DAN222-1	DIODE	351-90354946	
D1201	DIODE DAN222-1	DIODE	351-90354946	
D1202	DIODE ZD EX0227CEZZ	DIODE	351-90354951	
D201	DIODE DAN222-1	DIODE	351-90354946	
D4009	DIODE ZD EX0879CEZZ	DIODE	351-90354966	
D4010	DIODE ZD EX0879CEZZ	DIODE	351-90354966	
D4018	DIODE ZD EX1283CEZZ	DIODE	351-90354967	
D4019	DIODE ZD EX1283CEZZ	DIODE	351-90354967	
D4120	DIODE ZD EX1271CEZZ	DIODE	351-90354971	
D4121	DIODE ZD EX1271CEZZ	DIODE	351-90354971	
D4702	DIODE BA 592 SOD323	DIODE	351-25810	
D4703	DIODE BA 592 SOD323	DIODE	351-25810	
D4751	DIODE BA 592 SOD323	DIODE	351-25810	
D4752	DIODE BA 592 SOD323	DIODE	351-25810	
D4771	DIODE BA 592 SOD323	DIODE	351-25810	
D4772	DIODE BA 592 SOD323	DIODE	351-25810	
D4781	DIODE BA 592 SOD323	DIODE	351-25810	

POSNR. ITEMNMB	KURZTEXT DESCRIPTION	60415A70		BESTELLNR. LIST-PART-NMB	ENTF-DAT. LAST-DATE
D4832	DIODE BA 592 SOD323		DIODE	351-25810	
D702	DIODE SFPB56-2E		DIODE	351-90354947	
D703	DIODE 1SS250-1E		DIODE	351-90354948	
D704	DIODE 1SS250-1E		DIODE	351-90354948	
D705	DIODE DAN222-1		DIODE	351-90354946	
D706	DIODE SFPB74-2E		DIODE	351-90354949	
D707	DIODE DAN222-1		DIODE	351-90354946	
D709	DIODE DAN222-1		DIODE	351-90354946	
D710	DIODE DAN222-1		DIODE	351-90354946	
D712	DIODE DAN222-1		DIODE	351-90354946	
D753	DIODE IMN10-1		DIODE	351-90354950	
D754	DIODE IMN10-1		DIODE	351-90354950	
Q1001	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1003	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1004	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1005	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1006	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1007	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1008	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1009	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1010	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1011	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1012	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1013	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1014	TRANS BC857B SOT23		TRANSISTOR	344-14979	
Q1015	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1016	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1017	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1018	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1019	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1020	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1021	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1022	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1023	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1024	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1025	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1026	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q1027	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1028	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1029	TRANS BCX69-25		TRANSISTOR	344-24714	
Q1030	TRANS BF 840 SMD		TRANSISTOR	344-28018	
Q1031	TRANS BF550 SOT23		TRANSISTOR	344-23563	
Q1032	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
Q1033	TRANS BC857BW SOT323	LV030	TRANSISTOR	344-28404	
Q1101	TRANS 2SA1729-1		TRANSISTOR	344-90354943	
Q1102	TRANS 2SC4520-1		TRANSISTOR	344-90354944	
Q1201	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q1202	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q2003	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q2004	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q2005	TRANS DTA144EE-1		TRANSISTOR	344-90354945	
Q2006	TRANS DTC144EE-1		TRANSISTOR	344-90354937	
Q201	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q202	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	
Q203	TRANS FMY3/////-1		TRANSISTOR	344-90354934	
Q204	TRANS 2SC2712Y-1		TRANSISTOR	344-90354933	

POSNR. ITEMNMB	KURZTEXT DESCRIPTION		BESTELLNR. LIST-PART-NMB	ENTF-DAT. LAST-DATE
Q302	TRANS 2SA1162Y-1	TRANSISTOR	344-90354935	
Q303	TRANS DTC314TK-1	TRANSISTOR	344-90354936	
Q304	TRANS DTC314TK-1	TRANSISTOR	344-90354936	
Q305	TRANS DTC314TK-1	TRANSISTOR	344-90354936	
Q308	TRANS DTC144EE-1	TRANSISTOR	344-90354937	
Q4106	TRANS DTC144EE-1	TRANSISTOR	344-90354937	
Q4107	TRANSISTOR UMG4/////-1	TRANSISTOR	344-90354970	
Q4702	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+	TRANSISTOR	344-27270	
Q4709	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+	TRANSISTOR	344-27270	
Q4752	TRANS DIGITAL SOT323 NPN 50V 100MA 47K	TRANSISTOR	344-28555	31.12.1999
Q4754	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+	TRANSISTOR	344-27270	
Q4772	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+	TRANSISTOR	344-27270	
Q4772	TRANS DIGITAL SOT323 NPN 50V 100MA 47K	TRANSISTOR	344-28555	
Q4774	TRANS DIGITAL SOT323 NPN 50V 70MA 47K+	TRANSISTOR	344-27270	
Q4804	TRANS BC857W SOT323	TRANSISTOR	344-27468	
Q4804	TRANS BC857BW SOT323 LV030	TRANSISTOR	344-28404	
Q4832	TRANS BCR198W SOT323 PNP	TRANSISTOR	344-27269	
Q4833	TRANS BC847BW SOT323	TRANSISTOR	344-27272	
Q701	TRANS 2SA1162Y-1	TRANSISTOR	344-90354935	
Q702	TRANS 2SK2503-1	TRANSISTOR	344-90354938	
Q703	TRANS 2SC2712Y-1	TRANSISTOR	344-90354933	
Q707	TRANS DTC144EE-1	TRANSISTOR	344-90354937	
Q708	TRANS FMMT718-1	TRANSISTOR	344-90354939	
Q709	TRANS DTC144EE-1	TRANSISTOR	344-90354937	
Q710	TRANS 2SA1162Y-1	TRANSISTOR	344-90354935	
Q751	TRANS FZT1053A-1	TRANSISTOR	344-90354940	
Q752	TRANS FZT1053A-1	TRANSISTOR	344-90354940	
Q753	TRANS 2SA1162Y-1	TRANSISTOR	344-90354935	
Q754	TRANS DTC114YE-1	TRANSISTOR	344-90354941	
Q757	TRANS UPA606T-1	TRANSISTOR	344-90354942	
	SPEZIALTEILE	**SPECIAL PARTS**		
10	FILT. OFW K 9463 M	FILTER	290-25323	
20	DECKEL	LID	501-87236011	
21	DECKEL	LID	501-87236011	
21	KABELBAUM DISPLAY	CONNECTING CABLE	171-90414947	
2-12	SCHAUMGUMMI	FRAME	549-90354989	
2-2	RUECKWANDAUFKLEBER	FRAME	549-90354979	
25	TYPENSCHILD	INDICATING UNIT	663-90414949	
3-1	ABDECKUNG SELBSTKLEBEND SCHW. SCHLITZ	COVER	568-90354986	
3-2	SCHAUMGUMMI F. FUSSRING GEBOGEN 10 CM	COVER	568-90354987	
3-3	BODENPLATTE FUSSRING	BOTTOM COVER	777-90354988	
36	KABELBAUM 4-POL.	CONNECTING CABLE	171-90354995	
37	KABELBAUM 20-POL.	CONNECTING CABLE	171-90354997	
38	KABELBAUM 50-POL.	CONNECTING CABLE	171-90354994	
39	KABELBAUM 5-POL.	CONNECTING CABLE	171-90354993	
4	LAMPEN-SET	INCANDESCENT LAMP	383-90354998	
40	KABELBAUM 11-POL.	CONNECTING CABLE	171-90354992	
43	KABELBAUM 50-POL.	CONNECTING CABLE	171-90414956	
FB1202	SPULE	CHOKE	296-90354964	
FB1203	SPULE	CHOKE	296-90354965	
FB702	SPULE	CHOKE	296-90354961	
FB703	SPULE	CHOKE	296-90354961	
FB704	SPULE	CHOKE	296-90354961	
FB705	SPULE	CHOKE	296-90354962	
FB706	SPULE	CHOKE	296-90354961	

POSNR. ITEMNMB	KURZTEXT DESCRIPTION		BESTELLNR. LIST-PART-NMB	ENTF-DAT. LAST-DATE
FB708	SPULE	CHOKE	296-90354962	
FB709	SPULE	CHOKE	296-90354963	
L4192	LUFTSPULE	COIL	297-27573	18.07.2000
L4192	SPULE	COIL	297-27573001	15.01.1999
L4192	DR. 270N J 0603 SMD LV030 +	CHOKE	296-28579	
L4193	LUFTSPULE	COIL	297-27571	
L4201	LUFTSPULE	COIL	297-27571	
L4201	SPULE	COIL	297-27571001	
L4202	LUFTSPULE	COIL	297-28046	21.09.2000
L4202	DR-CH 330N0 J 0805 LL2012 LV030	CHOKE	296-29271	
L4231	SPULE	COIL	297-27569001	
L4232	SPULE	COIL	297-27569001	
L4233	SPULE	COIL	297-27561001	
L4301	SPULE	COIL	297-27562001	
L4301	SPULE	COIL	297-27566001	02.05.2001
L4302	SPULE	COIL	297-27561001	02.05.2001
L4302	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	09.05.2001
L4303	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	
L4311	LUFTSPULE	COIL	297-27571	
L4331	SPULE	COIL	297-27561001	
L4332	SPULE	COIL	297-27683001	
L4342	SPULE	COIL	297-27553001	02.05.2001
L4342	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	09.05.2001
L4343	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	
L4351	DR. 68N J 0805 800M-Q30 LV030	CHOKE	296-28465	
L4352	DR. 68N J 0805 800M-Q30 LV030	CHOKE	296-28465	
L4401	SPULE	COIL	297-27562001	
L4402	SPULE	COIL	297-27553001	
L4411	SPULE	COIL	297-27568001	
L4422	SPULE	COIL	297-27559001	
L4431	SPULE LV297-27546	COIL	297-27546001	
L4432	SPULE	COIL	297-27683001	
L4441	SPULE	COIL	297-27561001	02.05.2001
L4441	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	09.05.2001
L4442	SPULE	COIL	297-27683001	02.05.2001
L4442	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	09.05.2001
L4443	DR-CH 27N0 K 0805 LQN21A LV030	CHOKE	296-29269	
L4444	DR-CH 15N0 K 0805 LQN21A LV030	CHOKE	296-29270	
L4451	DR. 12N K 0805 800M-Q45 LV030	CHOKE	296-28466	
L4452	DR. 12N K 0805 800M-Q45 LV030	CHOKE	296-28466	
L4503	SPULE	COIL	297-27564001	
L4523	SPULE	COIL	297-27552001	
L4543	SPULE	COIL	297-27548001	
L4546	SPULE	COIL	297-27559001	
L4701	DR-RA 0U68 K 4X3X4 5R0 LV298-21/020	CHOKE	298-27591020	
L4816	SPULE LV297-27743	COIL	297-27743	
L4831	DR-RA 6U8 J 4X3X4 5R0 LV298-21/020	CHOKE	298-27588020	
L701	SPULE	CHOKE	296-90354955	
L705	SPULE	CHOKE	296-90354956	
L706	SPULE	CHOKE	296-90354955	
L751	SPULE	CHOKE	296-90354957	
L752	SPULE	CHOKE	296-90354957	
L804	SPULE	CHOKE	296-90354958	
L805	SPULE	CHOKE	296-90354958	
P4821	POT 10K 6MM KOHLESCHICHT HORIZONT.	POTENTIOMETER	375-27744	
Q4210	TRANS BF1100WR SOT343 +	TRANSISTOR	344-27268	

POSNR. ITEMNMB	KURZTEXT DESCRIPTION	60415A70		BESTELLNR. LIST-PART-NMB	ENTF-DAT. LAST-DATE
Q4310	TRANS BF1100WR SOT343	+	TRANSISTOR	344-27268	
Q4410	TRANS BF1100WR SOT343	+	TRANSISTOR	344-27268	
Q4836	TRANS BC847B SOT23		TRANSISTOR	344-14974	
Q4853	TRANS BC847BW SOT323		TRANSISTOR	344-27272	
W1001	FOLIENSTECKVERB. 20-POL RM0,5		CONTACT LEDGE	326-28933	
W1002	STIFTW.VERT 7-P NAT 2R50 EH LV326-11		CONTACT LEDGE	326-20908	
W1002	KONTAKTLEISTE 21POL RM2,54 LV326-27320		CONTACT LEDGE	326-27320021	
W1007	BUCHSENLEISTE 5POL RM5,08 LV326-28942		CONTACT LEDGE	326-28942005	
W1008	FLACHSTECKER,GEBOGEN" UG 2 " LV		PLUG	321-82232001	
W1009	FOLIENSTECKVERB. 50-POL RM0,5		CONTACT LEDGE	326-28934	
W1012	FLACHSTECKER,GEBOGEN" UG 2 " LV		PLUG	321-82232001	
W1013	STIFTW.VERT 11-P NAT 2R00 PH JST		CONTACT LEDGE	326-28935	
W1014	BUCHSENLEISTE 6POL RM5,08 LV326-28942		CONTACT LEDGE	326-28942006	
W1015	FLACHSTECKER,GEBOGEN" UG 2 " LV		PLUG	321-82232001	
W1018	FLACHSTECKER,GEBOGEN" UG 2 " LV		PLUG	321-82232001	
W4100	KOAX-BUCHSE		SOCKET	323-27599	
W4200	KONTAKTLEISTE 6POL RM5,08 LV326-27320		CONTACT LEDGE	326-27320016	
W4800	KONTAKTLEISTE 4POL RM5,08 LV326-27320		CONTACT LEDGE	326-27320014	
W4800	KONTAKTLEISTE 5POL RM5,08 LV326-27320		CONTACT LEDGE	326-27320015	26.01.2001
X4651	QUARZ 4,000000 MHZ HC49U3 LOW PROFILE		CRYSTAL OSCILLATOR	385-27752	
X4701	FILT. OFW K 6263 K		FILTER	290-25214	
X4751	FILT. OFW K 9463-M		FILTER	290-25323Y20	
X4771	FILT. OFW K 9461-M		FILTER	290-25216Y20	
X4831	PIEZO FILTER 5,5MHZ/5,742MHZ LV020		CERAMIC FILTER	386-27630020	
X4832	PIEZO FILTER 4,5 MHZ LV020		CERAMIC FILTER	386-27305020	

IMPORTANT SERVICE SAFETY PRECAUTION

Service work should be perfomed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

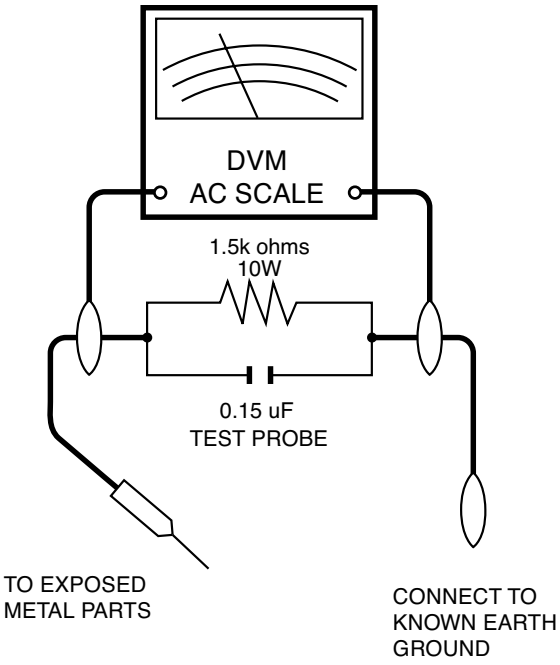
CAUTION
FOR CONTINUED PROTECTION
AGAINST A RISK OF FIRE REPLACE
ONLY WITH SAME TYPE FUSE.
F1 (2A, 250V), F2 (1.6A, 250V), F3 (1.6A, 250V),
F4 (315mA, 250V) FUSE.

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 110~240 volt AC outlet, and connect the DC power cable into the receiver's DC jack. (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15μF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resisor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon and etc.) and measure the AC voltage drop across the resistor.
  All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)
  Any reading of 0.75V peak (this corresponds to 0.5 milliamp. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD television have special safety-related characteristics.
These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage and etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the ***Replacement Parts Lists*** and ***Schematic Diagrams***.
For continued protection, replacement parts must be identical to those used in the original circuit.
The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

ELECTRICAL SPECIFICATIONS

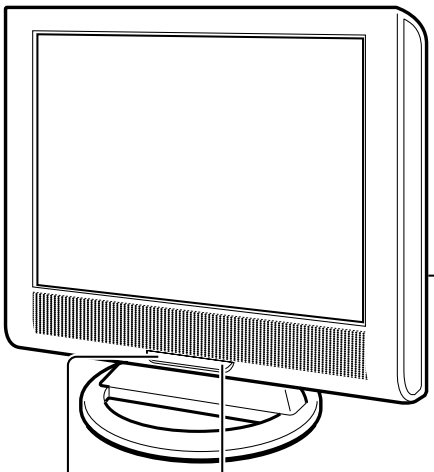
Items	15" LCD COLOUR TV, Model: LC-15A2L
LCD panel	15" TFT LCD
Number of pixels	921,600 dots
Video colour system	PAL/NTSC/SECAM
TV FUNCTION	
TV Standard (CCIR)	BG/DK/I/L
TV Tuning System	Auto preset 100 ch.
STEREO/BILINGUAL	NICAM, IGR
AUTO PRESET	Yes
CATV	~Hyper Band
Brightness	400 cd/m^2
Lamp life	60,000 hours
Viewing angles	H: 160° V: 160°
Audio amplifier	0.6 W 2, 2.5 W 1
Speakers	3 4 cm 2 pcs., 65 mm 1 pc.
Terminals	
AV1	VIDEO, S-VIDEO-IN, RGB, AUDIO
AV2	VIDEO, AUDIO
OUT	AUDIO
ANTENNA	DIN
HEADPHONE	3.5 mm jack (Rear)
OSD language	English/German/Dutch/French/Italian/Spanish/Swedish
Power requirement	DC 12V, AC 110 - 240 V, 50/60 Hz
Power consumption	27W (Connected to DC12V)
Weight	5.9 kg(approx.), incl. stand, excl. accessories
Accessories	R/C, Batteries, AC adapter, AC cord, Operation manual, Cable clamp

Specifications are subject to change without prior notice.

OPERATION MANUAL

Controls

Front view

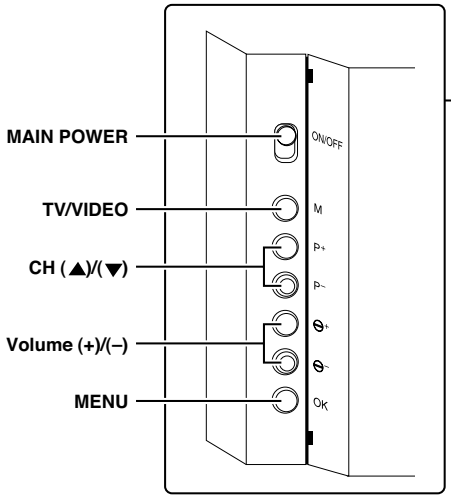


To change the vertical angle of the LCD TV set, tilt the screen up to 10 degrees forward or 20 degrees backward. The TV set can also be rotated 90 degrees horizontally. Please adjust the angle so that the TV set can be watched most comfortably.

Remote sensor window
(The actual location is not visible.)

Power/Standby indicator
A green indicator lights when the power is on and a red indicator lights when in the standby mode (the indicator will not light when the main power is off).

Rear control panel

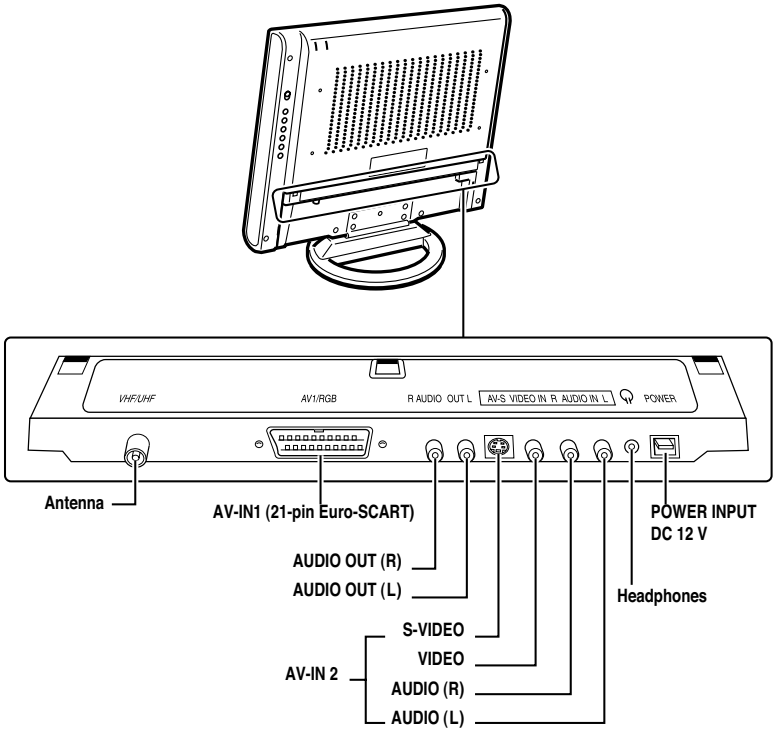


Note:

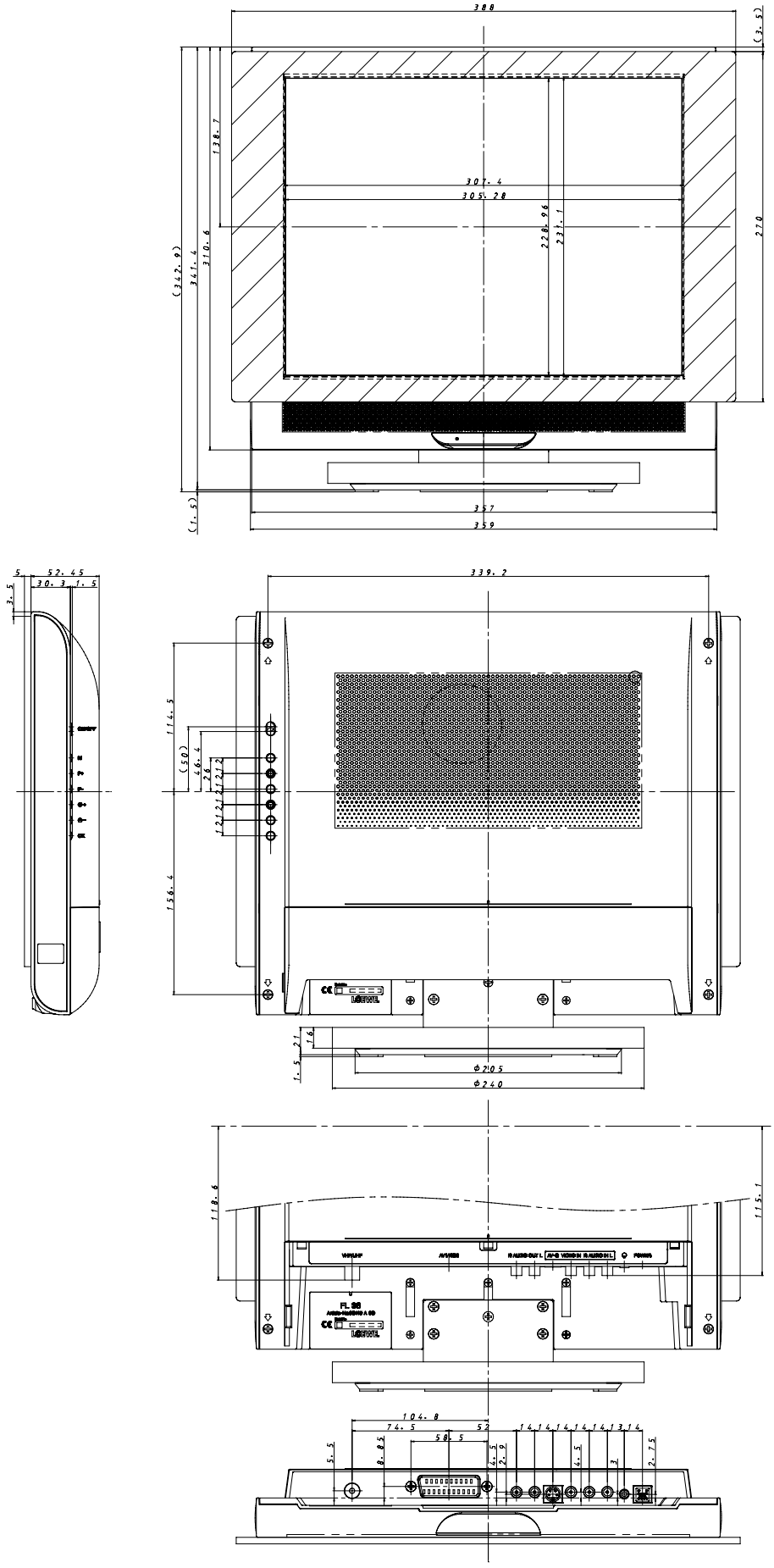
- **TV/VIDEO**, **CH(▲)/(▼)**, and **Volume (+)/(–)** on the main unit have the same functions as the same buttons on the remote control. Fundamentally, this operation manual provides a description based on operation using the remote control.

Terminals

Rear view



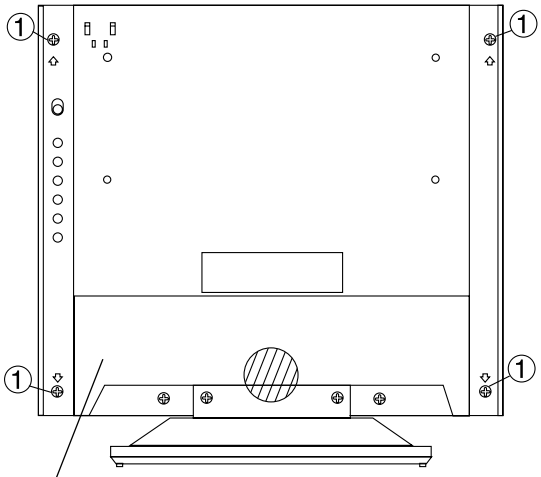
OUTLINE DIMENSION FIGURE



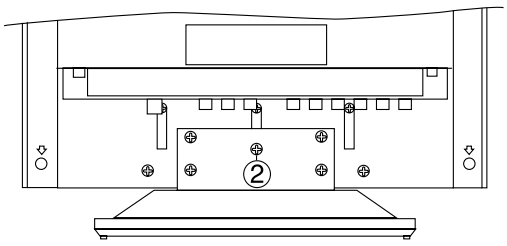
Units: mm

REMOVING OF MAJOR PARTS

1. Insert your finger into the center of the terminal cover and pull it toward you to detach the terminal cover. Remove the screws installing a stand.
2. Remove the four screws "1" and one screw "2".
3. Open the cabinet B by approx. 45˚ from the bottom of the cabinet (stand side).
4. Remove the lead wire from the cable clamp "3".
5. Remove the power connector "4".
6. Remove the connector "5" from the light reception unit.
7. Remove the lead wire from the cable clamp "6".
8. Remove the speaker connector "7".
9. Remove the FFC from the FFC connector "8" on the main PWB.
10. Remove the connector "9" from the switch PWB.
11. Remove the right and left speaker connectors "10" on the terminal PWB.



Terminal Cover



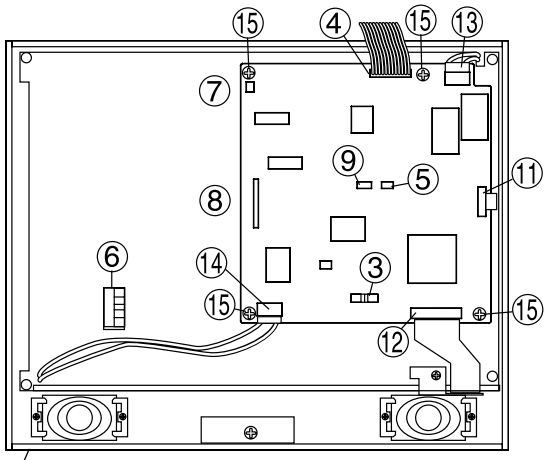
<<Disassembly of the main PWB>>

1. Disconnect the flexible cable connectors "11" and "12" from the LCD panel.
2. Disconnect the cable connectors "13" and "14" from the fluorescent lamp.
3. Remove the four screws "15".

<<Disassembly of the terminal PWB>>

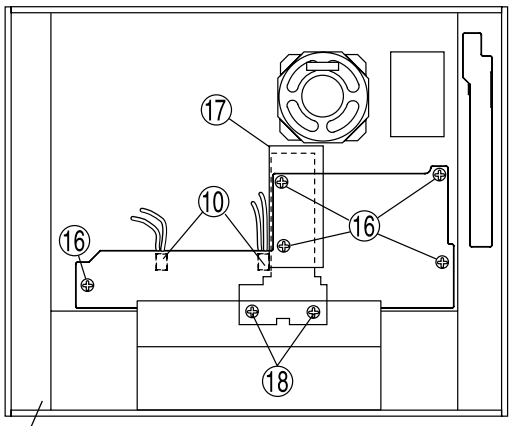
1. Remove the five screws "16".
2. Remove the two screws "18". Remove the cover "17". Take them out of the cabinet holes.

<<Cabinet A side>>



Cabinet A

<<Cabinet B side>>



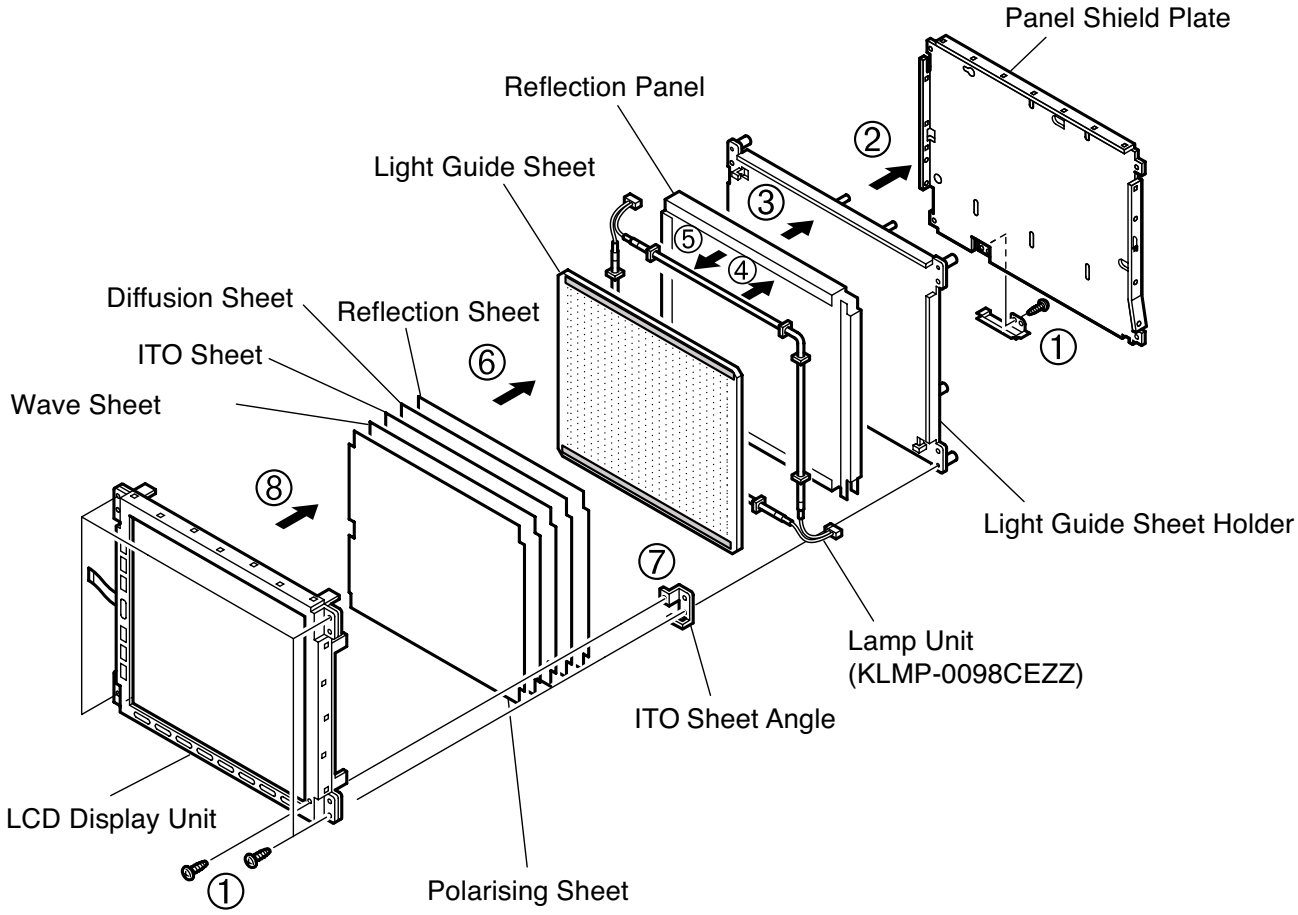
Cabinet B

• Caution for handling the LCD panel

1. Work in a clean room. (Humidity: 50% or more)
2. A worker must wear arm bands.
3. Work on a conductive mat.
4. Do not expose the unit to shock such as fall or vibration.

<<Disassembly of LCD Panel>>

1. Remove the six LCD unit fixing screws.
2. Remove the panel shield plate.
3. Remove the light guide sheet holder.
4. Remove the reflection panel lamp unit.
5. Remove the lamp unit.
6. Remove the light guide sheet.
7. Remove the ITO sheet angle.
8. Remove the ITO sheet, diffusion sheet and the polarising sheet.



ADJUSTING PROCEDURE OF EACH SECTION

[1] Entering the MAIN side adjustment process mode

There are three methods below.

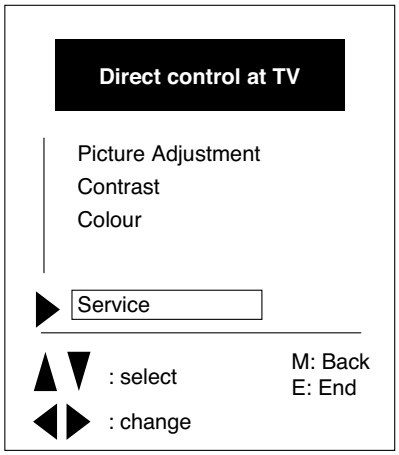
1) Press the “Adjustment process key” on the remote control after turning on the power.
2) Pressing both the M key and the TV/VIDEO key on the main body, turn on the power. Then, press the volume DOWN key and the tuning UP key at the same time.
3) Turn on the power with falling either KEY4 (pin 81 of microprocessor) or KEY5 (pin 82 of microprocessor) to “L”.

[Note] For the method 3), the ROM is initialized at the same time. Therefore, 3) must be executed if IC2004 or IC2001 is changed. For 1) or 2), the main body only enters the MAIN side adjustment process.

[2] Entering the TUNER side adjustment process mode

4) Entering the TUNER side adjustment process

MENU key on the main body Tuning UP key (remote control)
Select the position shown in the figure below and press the M key (remote control) within 1 second. Enters the adjustment process.



[3] Adjustment

MAIN side adjustment (Press the “M” key to move the cursor and press the volume UP/DOWN key to make an adjustment.)

- Power supply voltage adjustment (+B 5V)
- Model setting
- Inch size setting
- COMMON BIAS adjustment of LCD module
- CUTOFF adjustment

TUNER side adjustment (Press the tuning UP/DOWN key to move the cursor and press the volume UP/DOWN key to make an adjustment.)

- Horizontal size adjustment (LCD adjustments)
- Video adjustment (other adjustments)

  Y delay
  Subcontrast
  Subcolour
  Subbrightness
  Tint offset

The TUNER side adjustment is possible. However, it is recommended to replace EAROM (I2).

3-1. +B adjustment
  Page 9 of MAIN side adjustment process +B-ADJ
  Adjust the voltage of the pin 49 of SC401 to 5.0 ± 0.05V.

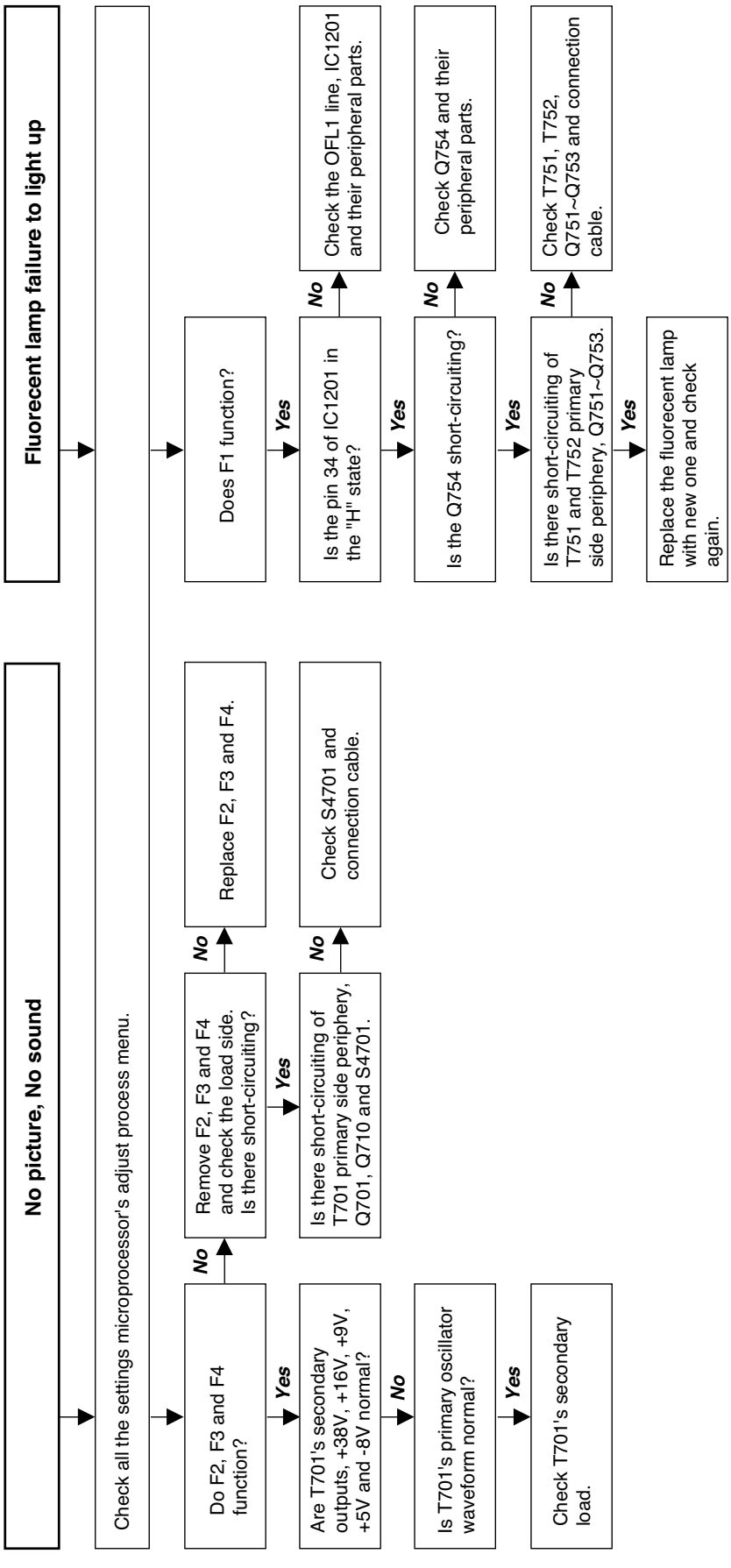
3-2. Model setting
  Page 9 of MAIN side adjustment process MODUL
  Set to A2L.

3-3. Inch size setting
  Page 9 of MAIN side adjustment process INCH SIZE
  Set to 15.

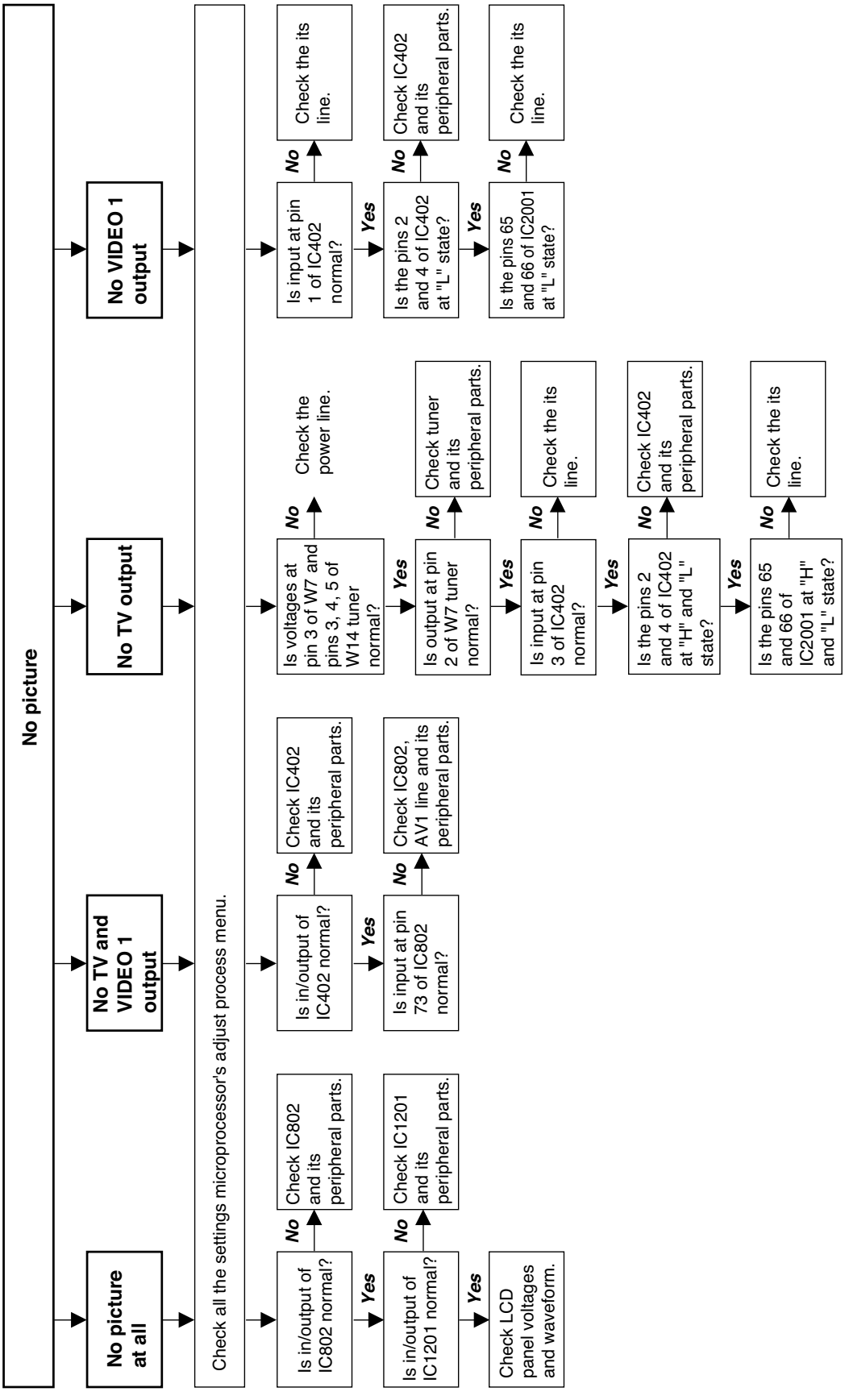
3-4. COMMON BIAS adjustment of LCD module
  Page 9 of MAIN side adjustment process COM BIAS
  Input the picture of gray scale and adjust it so as to obtain the best contrast.

3-5. CUTOFF adjustment
  Page 9 of MAIN side adjustment process R CUTOFF, B CUTOFF
  Adjust it so as to obtain the optimal colour balance.

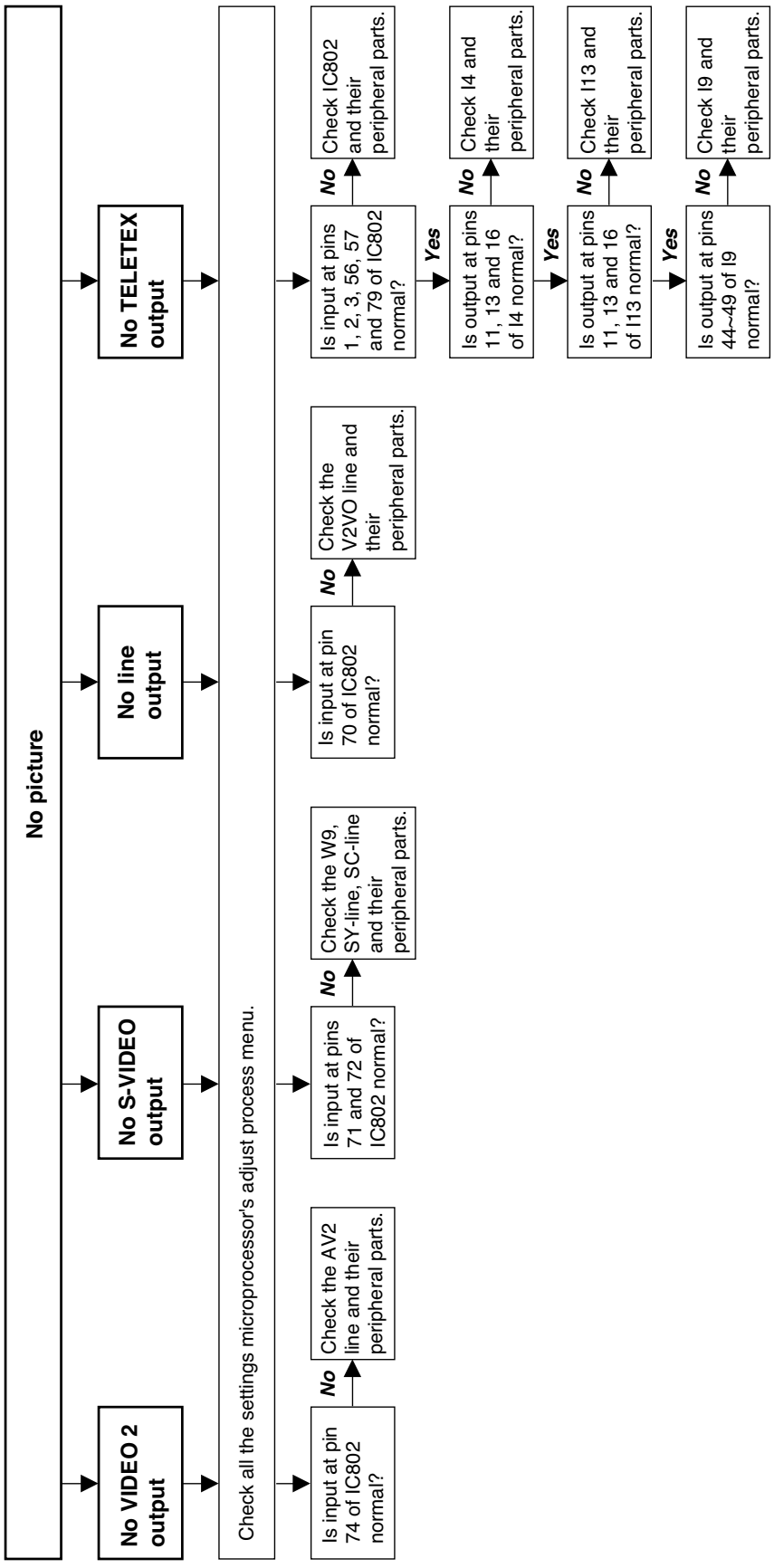
TROUBLE SHOOTING TABLE


No picture, No sound
Check all the settings microprocessor's adjust process menu.
Do F2, F3 and F4 function?
No
Remove F2, F3 and F4 and check the load side. Is there short-circuiting?
No
Replace F2, F3 and F4.
Yes
Is there short-circuiting of T701 primary side periphery, Q701, Q710 and S4701.
No
Check S4701 and connection cable.
Yes
Are T701's secondary outputs, +38V, +16V, +9V, +5V and -8V normal?
No
Is T701's primary oscillator waveform normal?
Yes
Check T701's secondary load.
Fluorecent lamp failure to light up
Does F1 function?
Yes
Is the pin 34 of IC1201 in the "H" state?
No
Check the OFL1 line, IC1201 and their peripheral parts.
Yes
Is the Q754 short-circuiting?
No
Check Q754 and their peripheral parts.
Yes
Is there short-circuiting of T751 and T752 primary side periphery, Q751~Q753.
No
Check T751, T752, Q751~Q753 and connection cable.
Yes
Replace the fluorecent lamp with new one and check again.

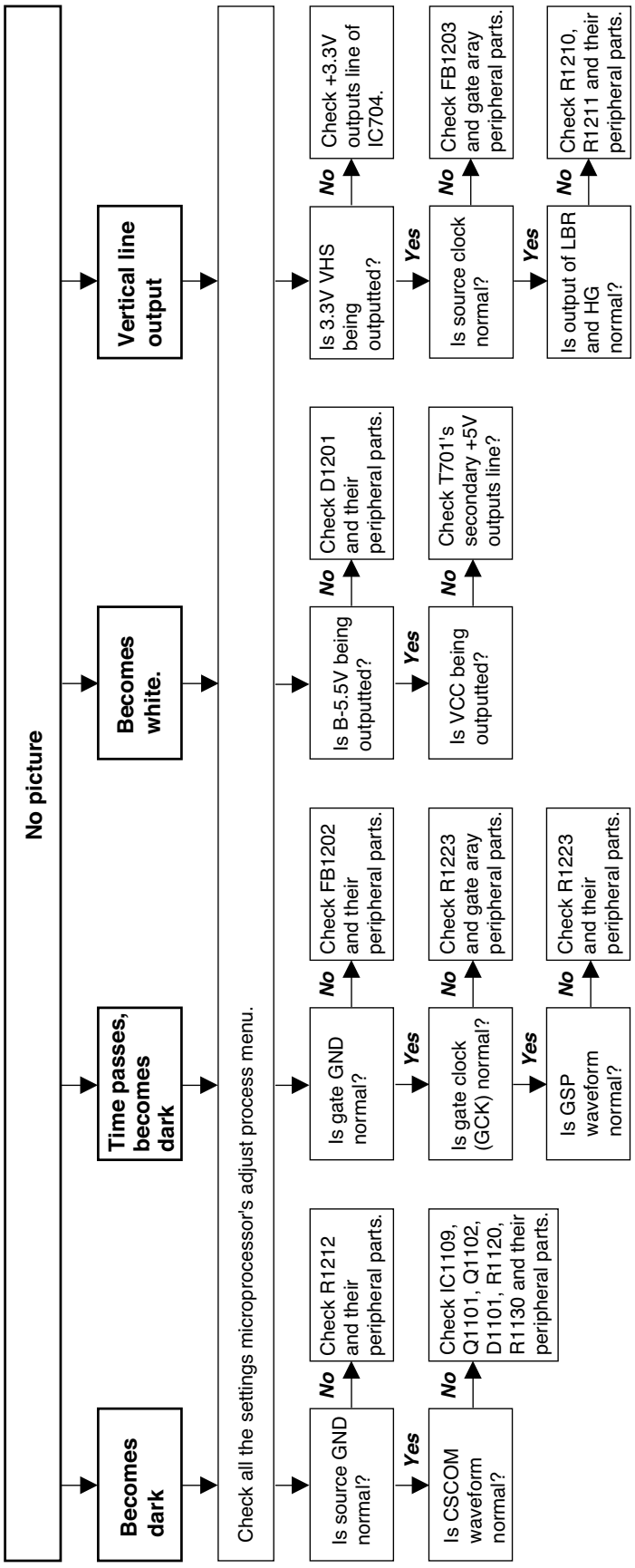
TROUBLE SHOOTING TABLE (Continued)


No picture
No picture at all
No TV and VIDEO 1 output
No TV output
No VIDEO 1 output
Check all the settings microprocessor's adjust process menu.
Is in/output of IC802 normal?
No
Check IC802 and its peripheral parts.
Yes
Is in/output of IC1201 normal?
No
Check IC1201 and its peripheral parts.
Yes
Check LCD panel voltages and waveform.
Is in/output of IC402 normal?
No
Check IC402 and its peripheral parts.
Yes
Is input at pin 73 of IC802 normal?
No
Check IC802, AV1 line and its peripheral parts.
Is voltages at pin 3 of W7 and pins 3, 4, 5 of W14 tuner normal?
No
Check the power line.
Yes
Is output at pin 2 of W7 tuner normal?
No
Check tuner and its peripheral parts.
Yes
Is input at pin 3 of IC402 normal?
No
Check the its line.
Yes
Is the pins 2 and 4 of IC402 at "H" and "L" state?
No
Check IC402 and its peripheral parts.
Yes
Is the pins 65 and 66 of IC2001 at "H" and "L" state?
No
Check the its line.
Is input at pin 1 of IC402 normal?
No
Check the its line.
Yes
Is the pins 2 and 4 of IC402 at "L" state?
No
Check IC402 and its peripheral parts.
Yes
Is the pins 65 and 66 of IC2001 at "L" state?
No
Check the its line.

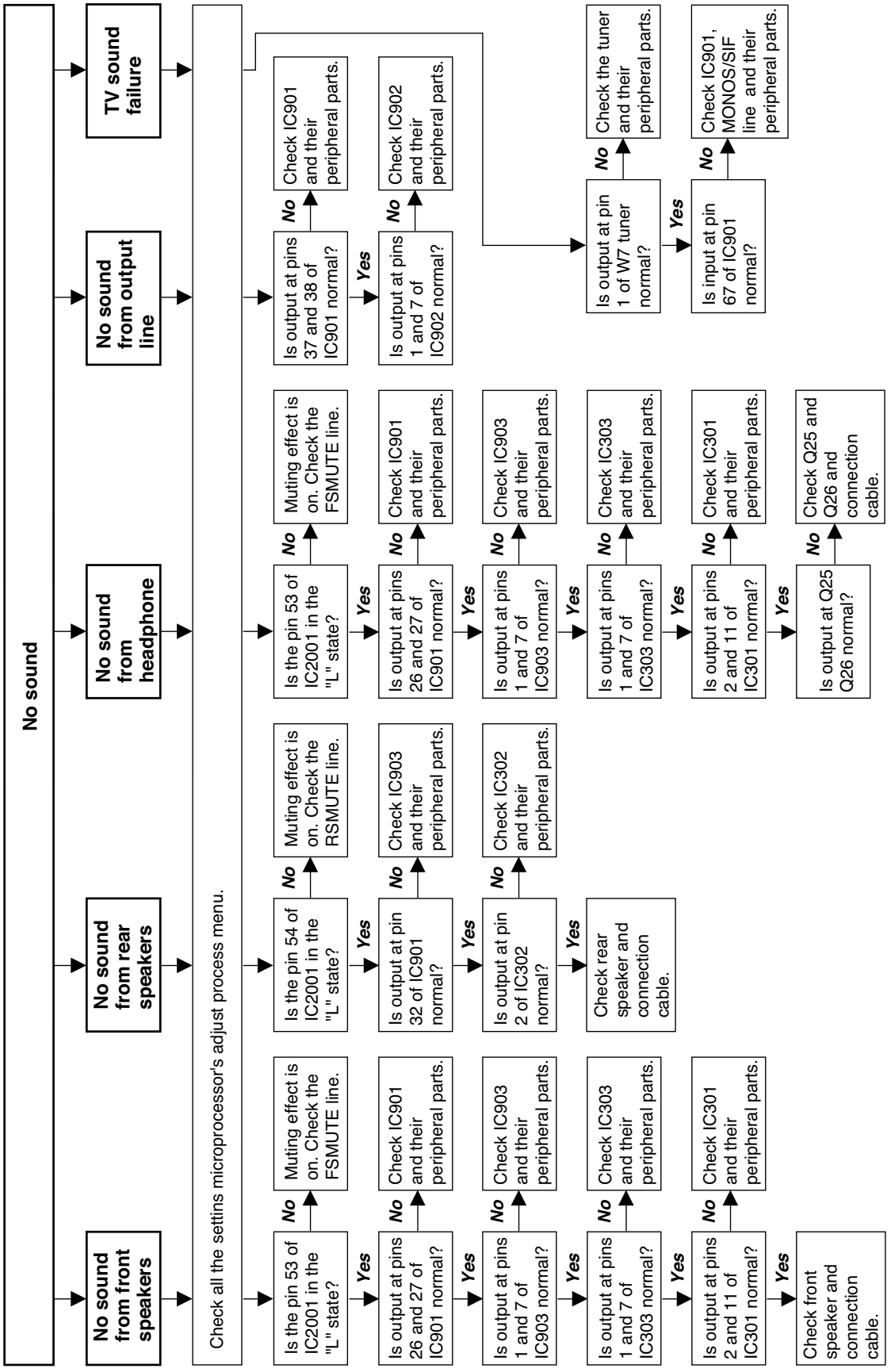
TROUBLE SHOOTING TABLE (Continued)


No picture
No VIDEO 2 output
No S-VIDEO output
No line output
No TELETEX output
Check all the settings microprocessor's adjust process menu.
Is input at pin 74 of IC802 normal?
No
Check the AV2 line and their peripheral parts.
Is input at pins 71 and 72 of IC802 normal?
No
Check the W9, SY-line, SC-line and their peripheral parts.
Is input at pin 70 of IC802 normal?
No
Check the V2VO line and their peripheral parts.
Is input at pins 1, 2, 3, 56, 57 and 79 of IC802 normal?
Yes
No
Check IC802 and their peripheral parts.
Is output at pins 11, 13 and 16 of I4 normal?
Yes
No
Check I4 and their peripheral parts.
Is output at pins 11, 13 and 16 of I13 normal?
Yes
No
Check I13 and their peripheral parts.
Is output at pins 44~49 of I9 normal?
Yes
No
Check I9 and their peripheral parts.

TROUBLE SHOOTING TABLE (Continued)

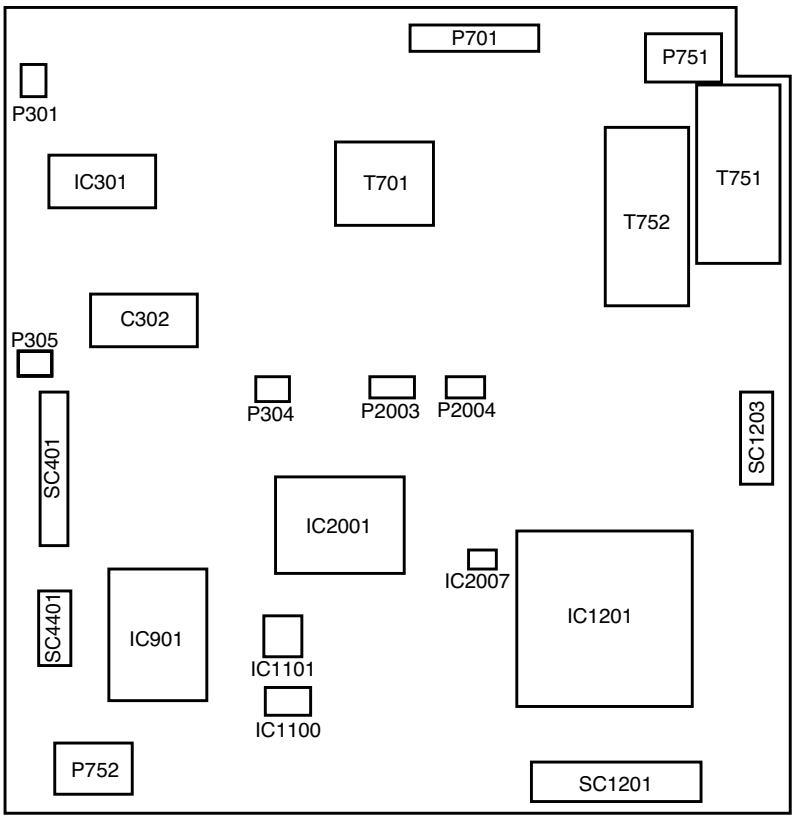


TROUBLE SHOOTING TABLE (Continued)

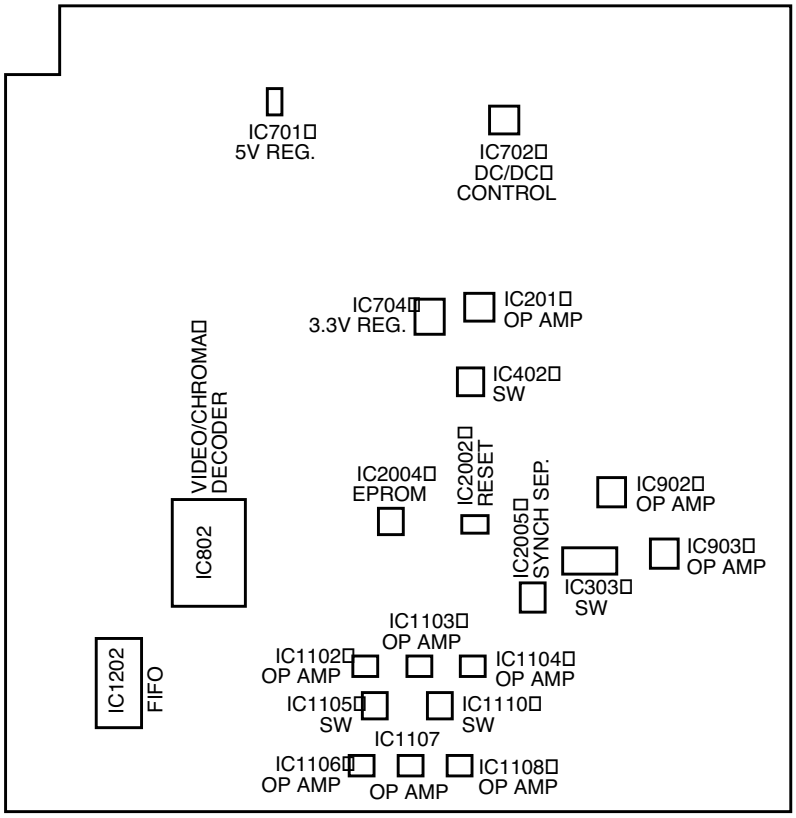

No sound
No sound from front speakers
No sound from rear speakers
No sound from headphone
No sound from output line
TV sound failure
Check all the settins microprocessor's adjust process menu.
Is the pin 53 of IC2001 in the "L" state?
Yes
No
Muting effect is on. Check the FSMUTE line.
Is output at pins 26 and 27 of IC901 normal?
Check IC901 and their peripheral parts.
Is output at pins 1 and 7 of IC903 normal?
Check IC903 and their peripheral parts.
Is output at pins 1 and 7 of IC303 normal?
Check IC303 and their peripheral parts.
Is output at pins 2 and 11 of IC301 normal?
Check IC301 and their peripheral parts.
Check front speaker and connection cable.
Is the pin 54 of IC2001 in the "L" state?
Muting effect is on. Check the RSMUTE line.
Is output at pin 32 of IC901 normal?
Check IC903 and their peripheral parts.
Is output at pin 2 of IC302 normal?
Check IC302 and their peripheral parts.
Check rear speaker and connection cable.
Is the pin 53 of IC2001 in the "L" state?
Muting effect is on. Check the FSMUTE line.
Is output at pins 26 and 27 of IC901 normal?
Check IC901 and their peripheral parts.
Is output at pins 1 and 7 of IC903 normal?
Check IC903 and their peripheral parts.
Is output at pins 1 and 7 of IC303 normal?
Check IC303 and their peripheral parts.
Is output at pins 2 and 11 of IC301 normal?
Check IC301 and their peripheral parts.
Is output at Q25 Q26 normal?
Check Q25 and Q26 and connection cable.
Is output at pins 37 and 38 of IC901 normal?
Check IC901 and their peripheral parts.
Is output at pins 1 and 7 of IC902 normal?
Check IC902 and their peripheral parts.
Is output at pin 1 of W7 tuner normal?
Check the tuner and their peripheral parts.
Is input at pin 67 of IC901 normal?
Check IC901, MONOS/SIF line and their peripheral parts.

CHASSIS LAYOUT

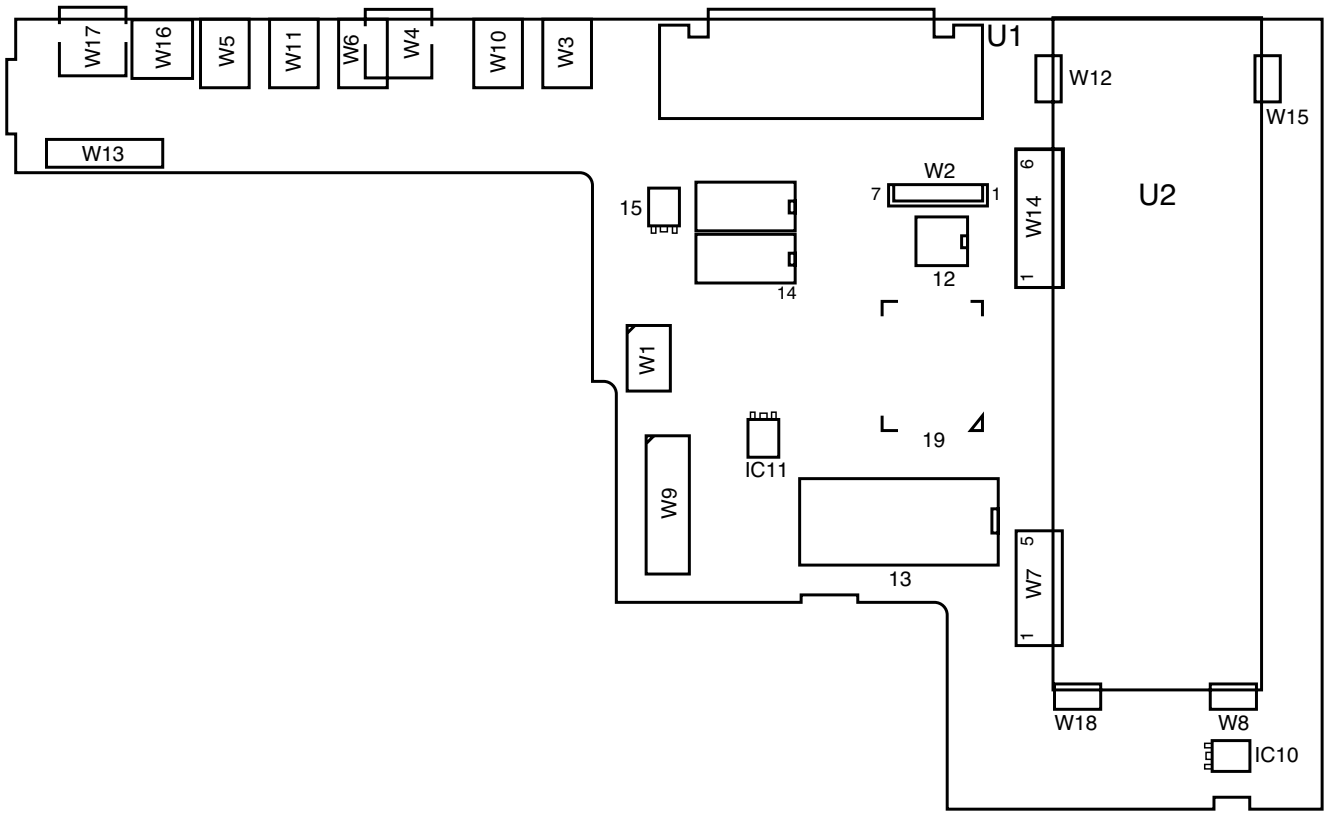
MAIN Unit (Side-A)



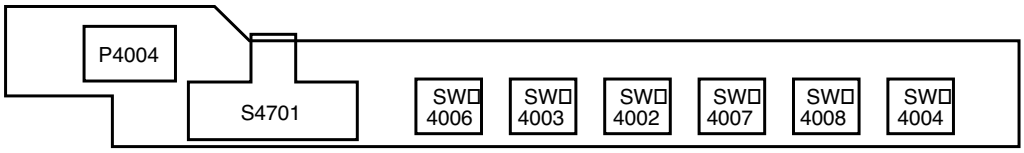
MAIN Unit (Side-B)



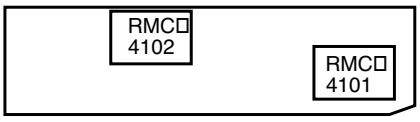
TERMINAL Unit



OPERATION Unit

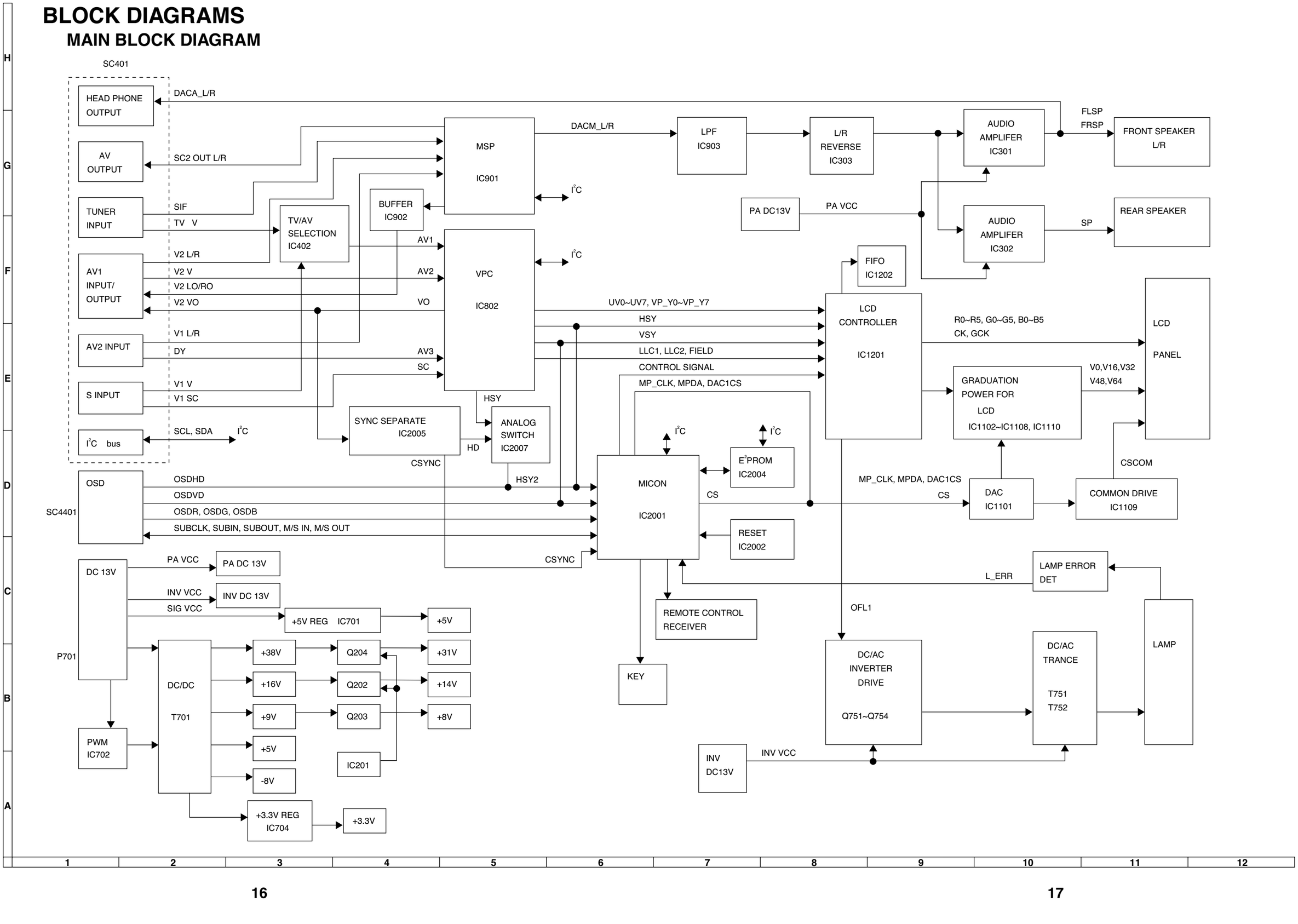


R/C RECEIVER Unit

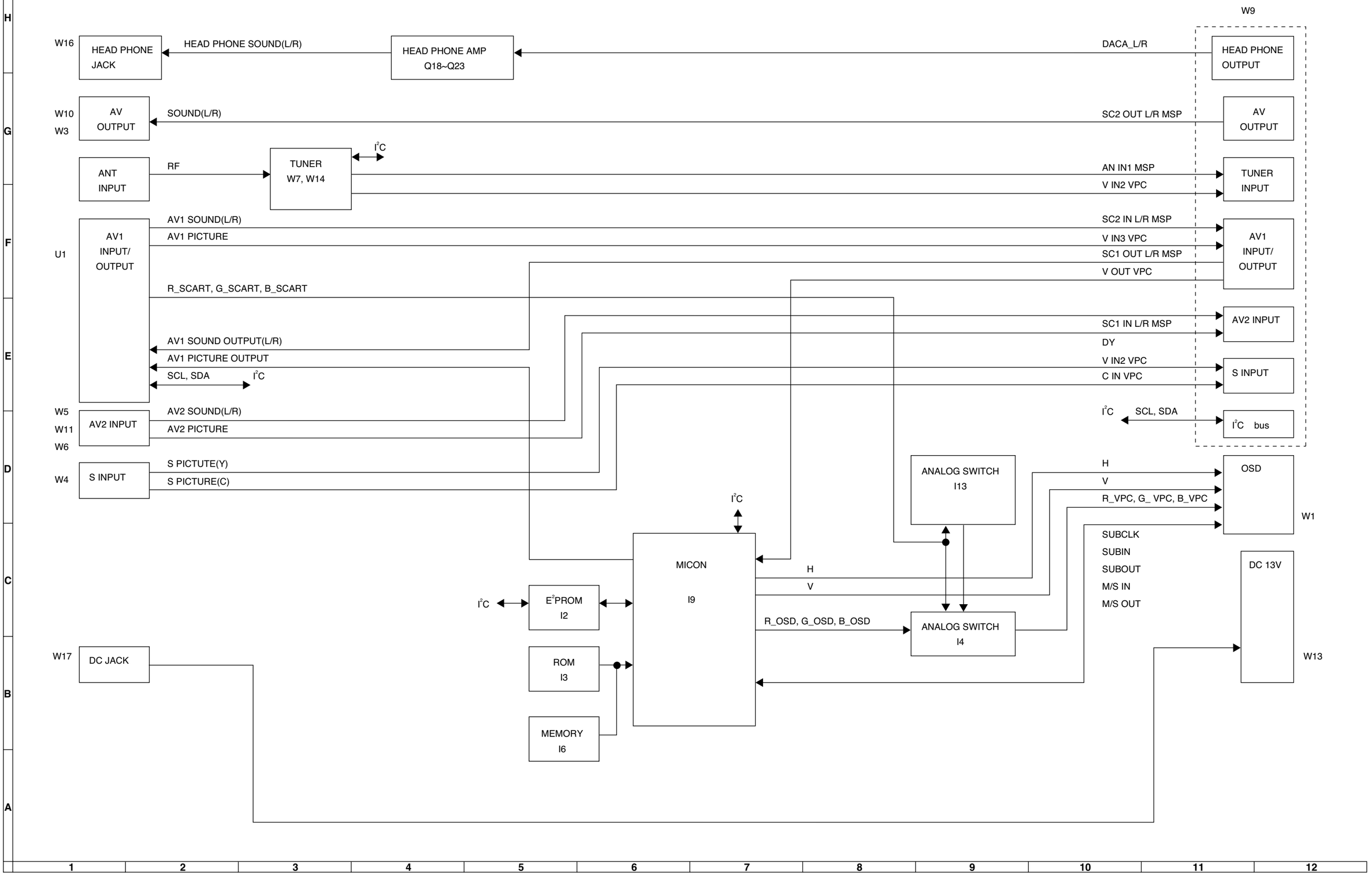


BLOCK DIAGRAMS

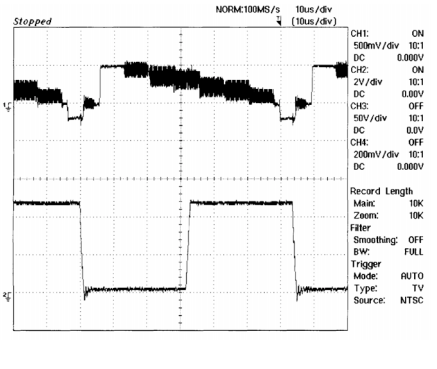
MAIN BLOCK DIAGRAM



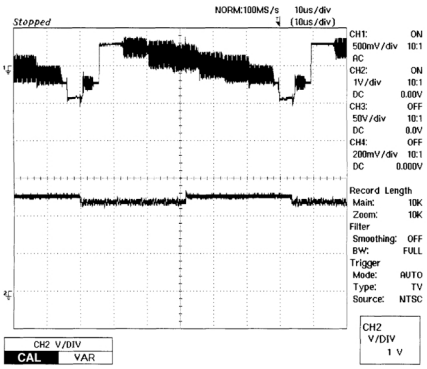
TERMINAL BLOCK DIAGRAM



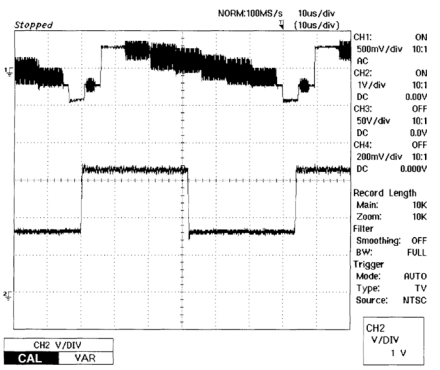
WAVEFORMS



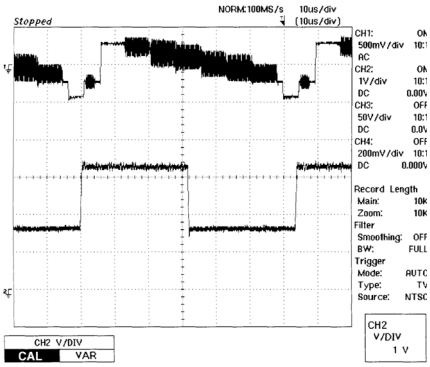
A. V0



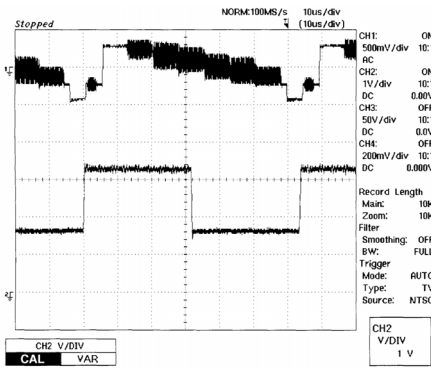
B. V16



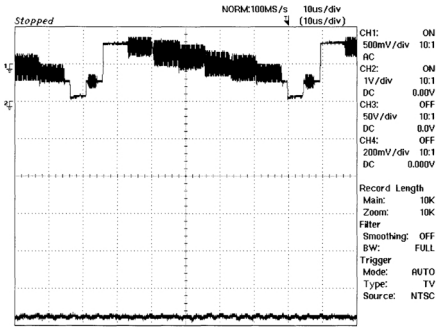
C. V32



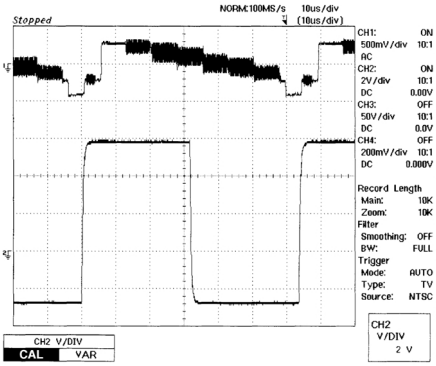
D. V48



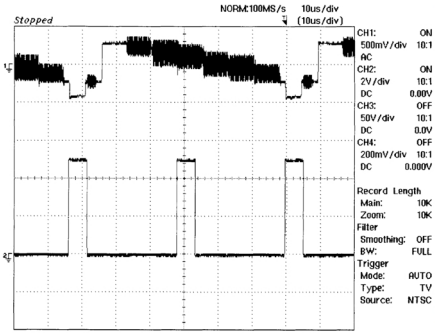
E. V63



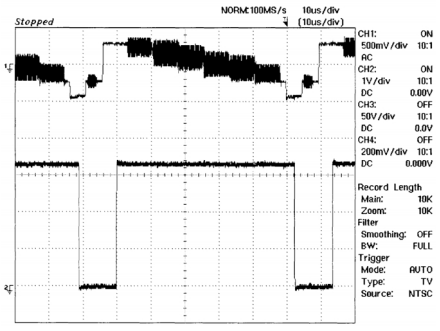
F. B-5.5



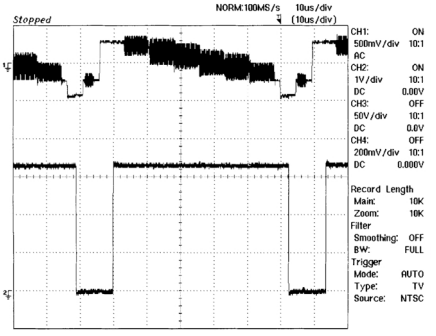
G. CSCOM



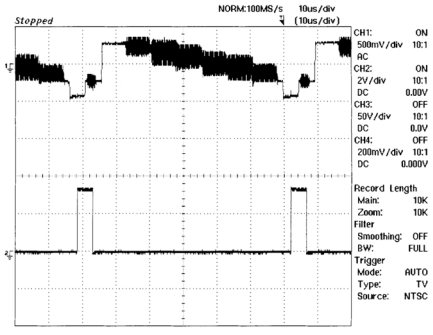
H. GCK



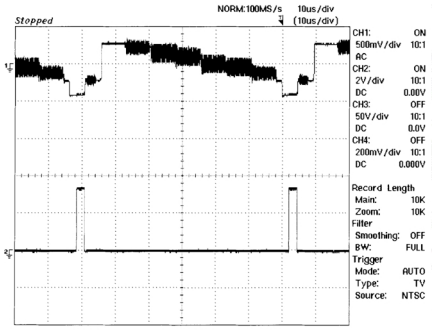
I. GSP



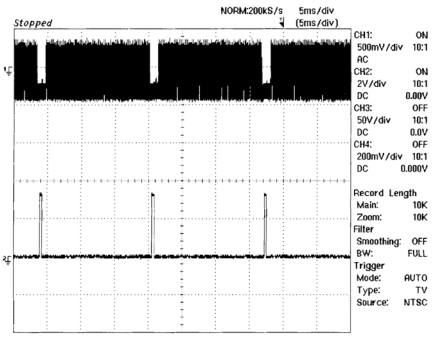
J. VACT



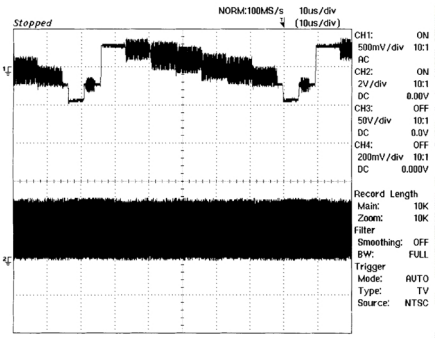
K. HC



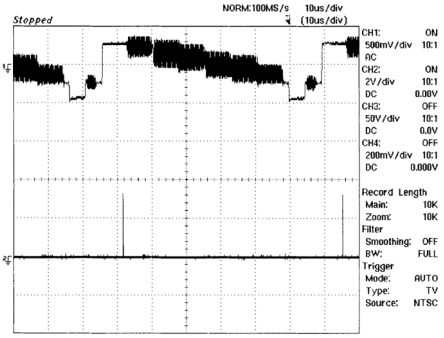
L. HSY



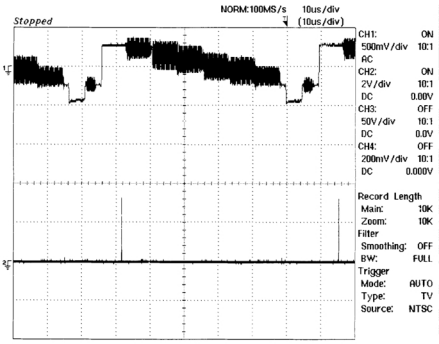
M. VSY



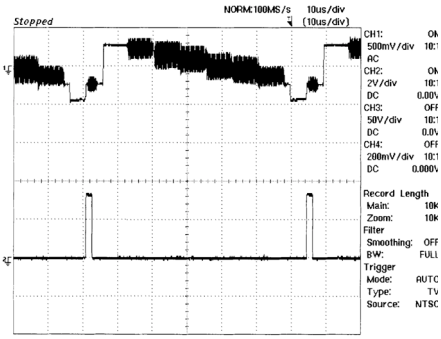
N. CK



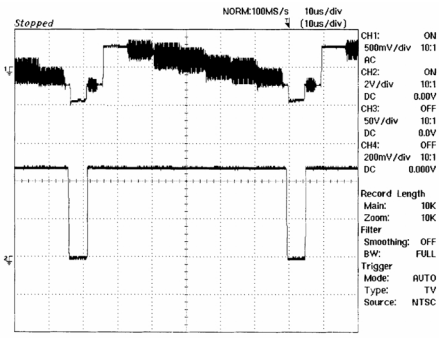
O. SPIO



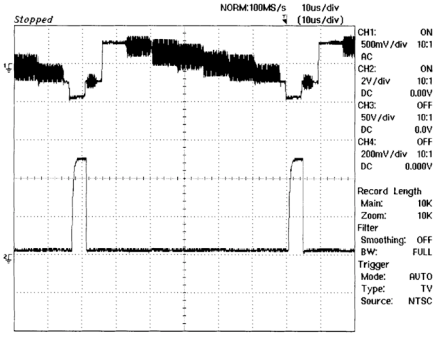
P. SPOI



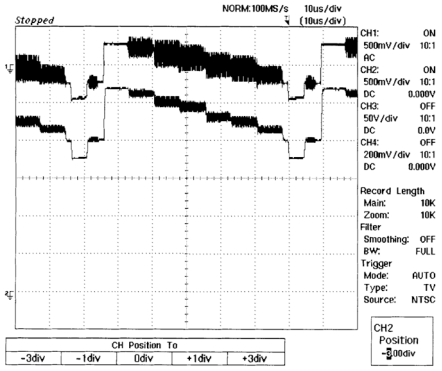
Q. HG



R. IC2005



S. CSYNC



T. VIDEO

DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. When the exclusive-use AC adapter is used, the colour bar signal of colour bar generator for service is input to get the normal screen. When the audio is minimized, the voltage value is measured with the 20 k /V tester.

WAVEFORM MEASUREMENT CONDITION:

1. When the exclusive-use AC adapter is used, the colour density, lightness and colour hue are set to the center position, and the signal of colour bar generator for service is observed to get waveform.
   The waveform test point is indicated with the mark (Q) in the wiring diagram.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted.
   (K=k =1000 , M=M).
2. All resistors are ± 5%, unless otherwise noted.
   (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. All resistors are Carbon type, unless otherwise noted.
   Ⓒ: Solid Ⓦ: Cement
   Ⓢ: Oxide Film Ⓣ: Special
   Ⓝ: Metal Coating

CAPACITOR

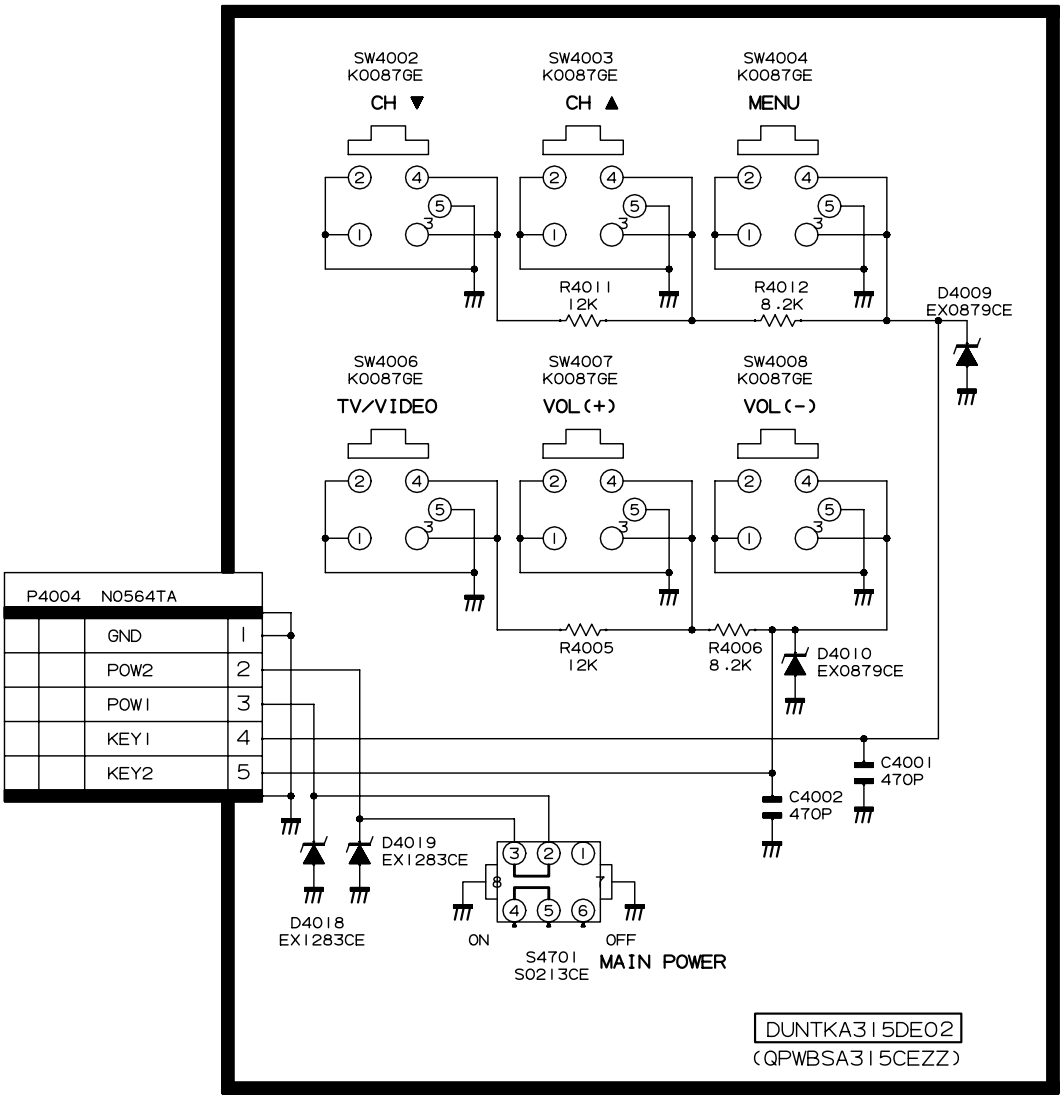
1. All capacitors are mF, unless otherwise noted.
   (P=pF=mmF).
2. All capacitors are Ceramic type, unless otherwise noted.
   (ML) : Mylar (TA) : Tantalum
   (PF) : Polypro Film (ST) : Styrol

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

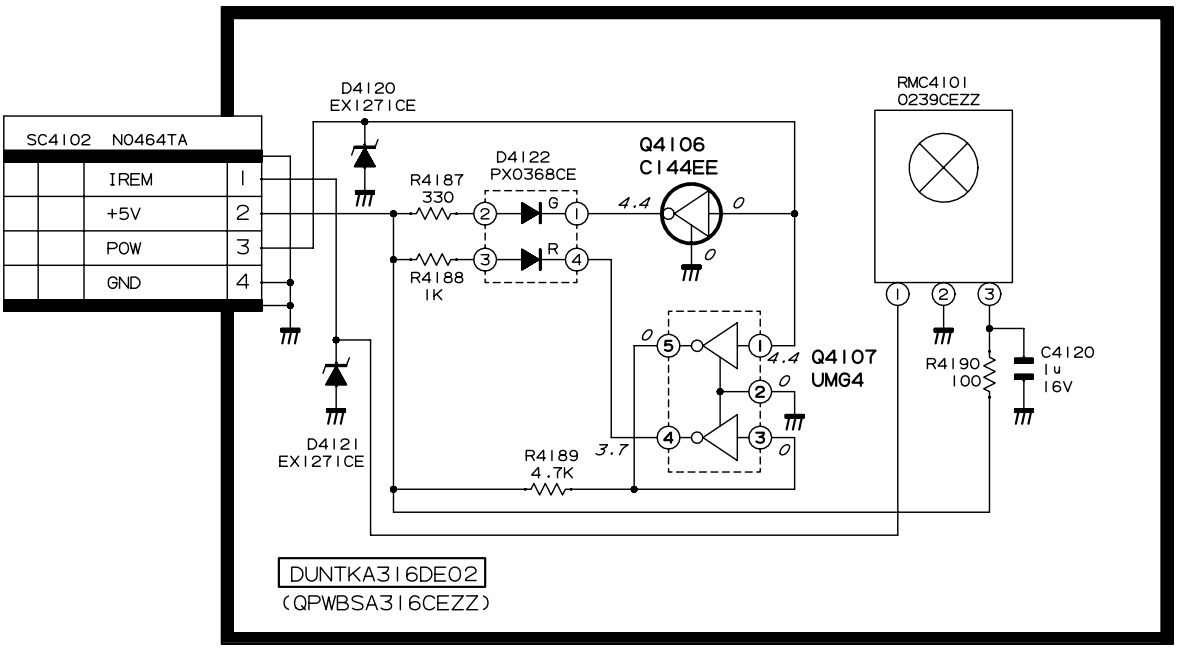
IMPORTANT SAFETY NOTICE:
PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

OPERATION and R/C RECEIVER Units

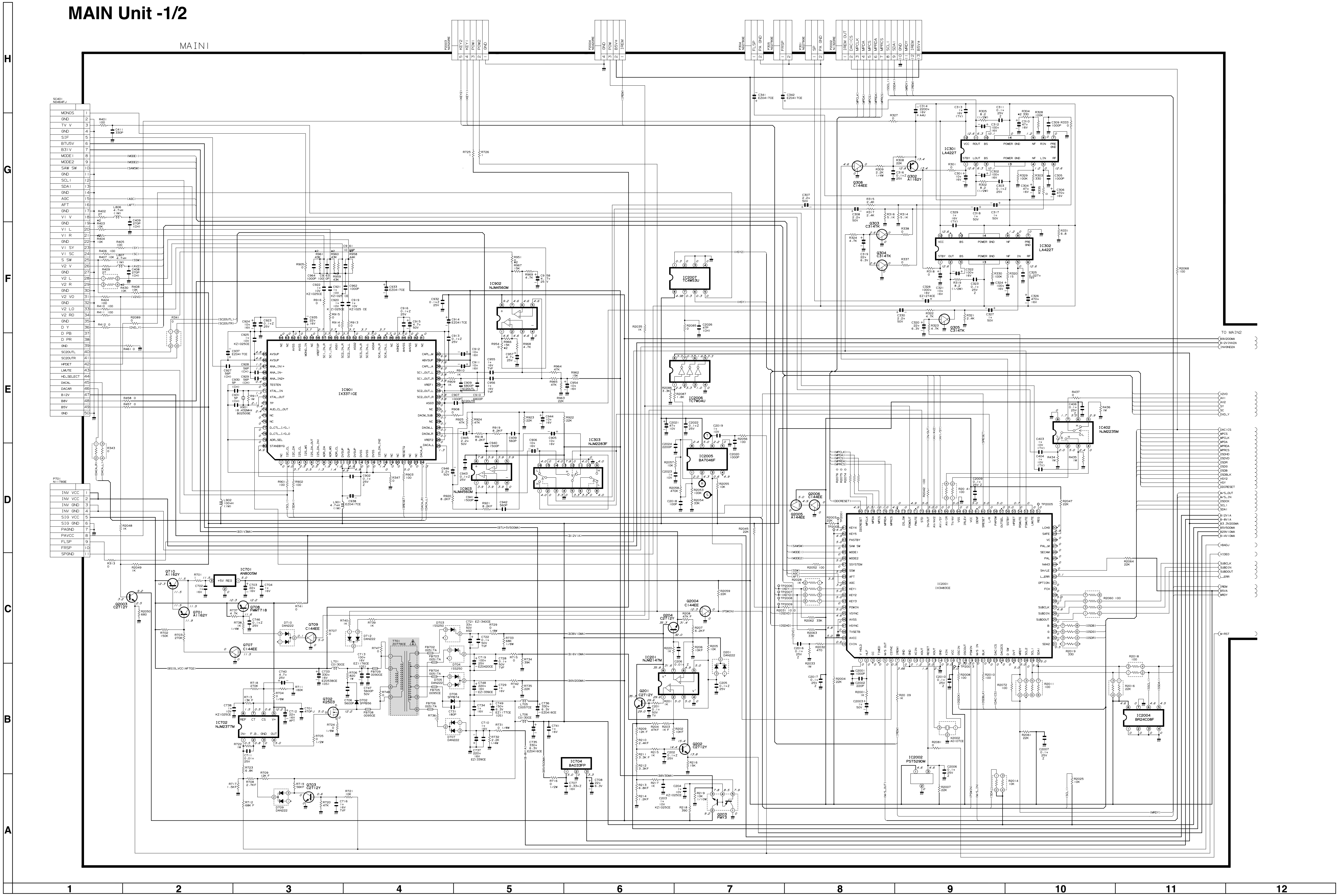
OPERATION



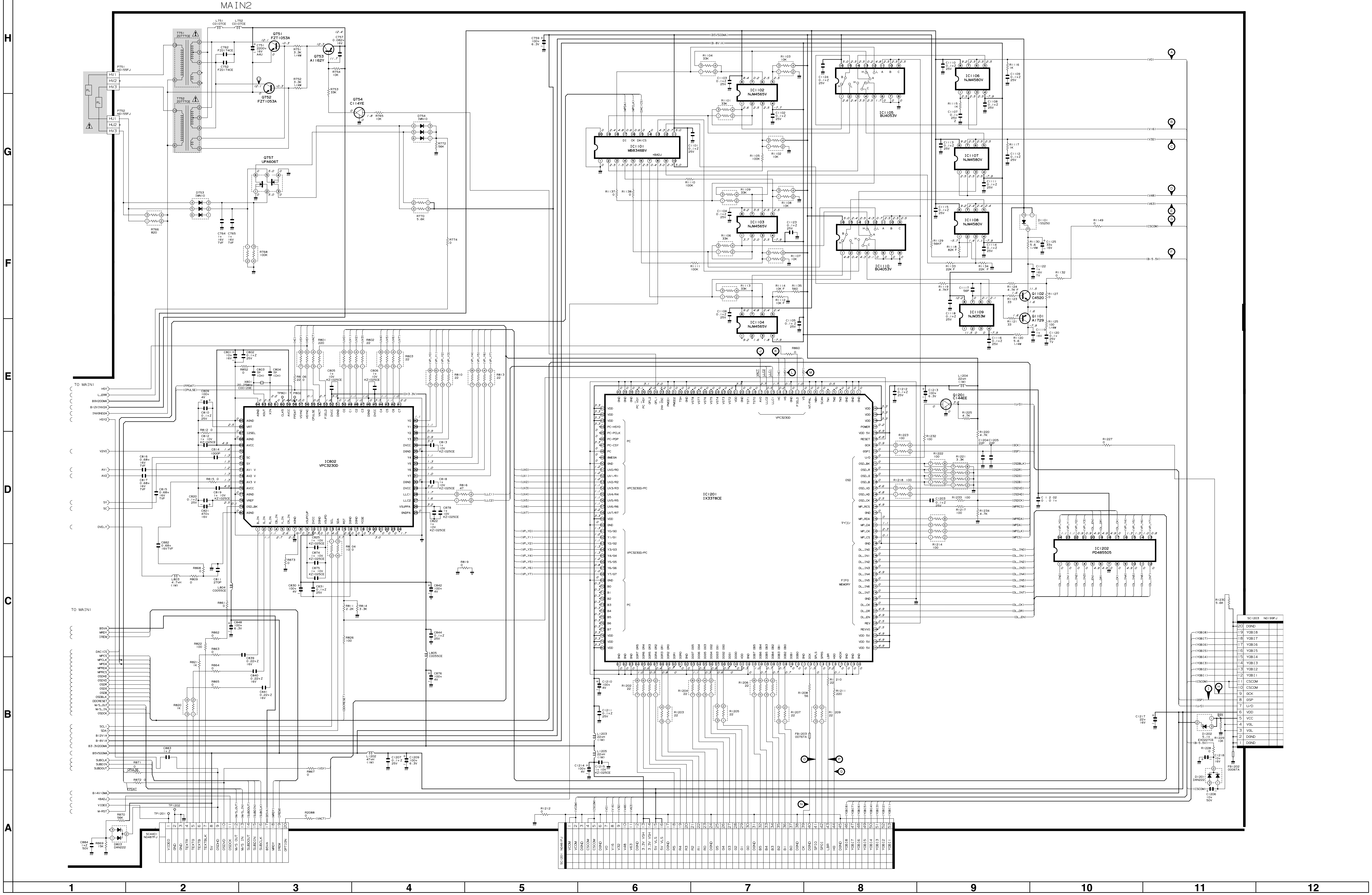
R/C RECEIVER



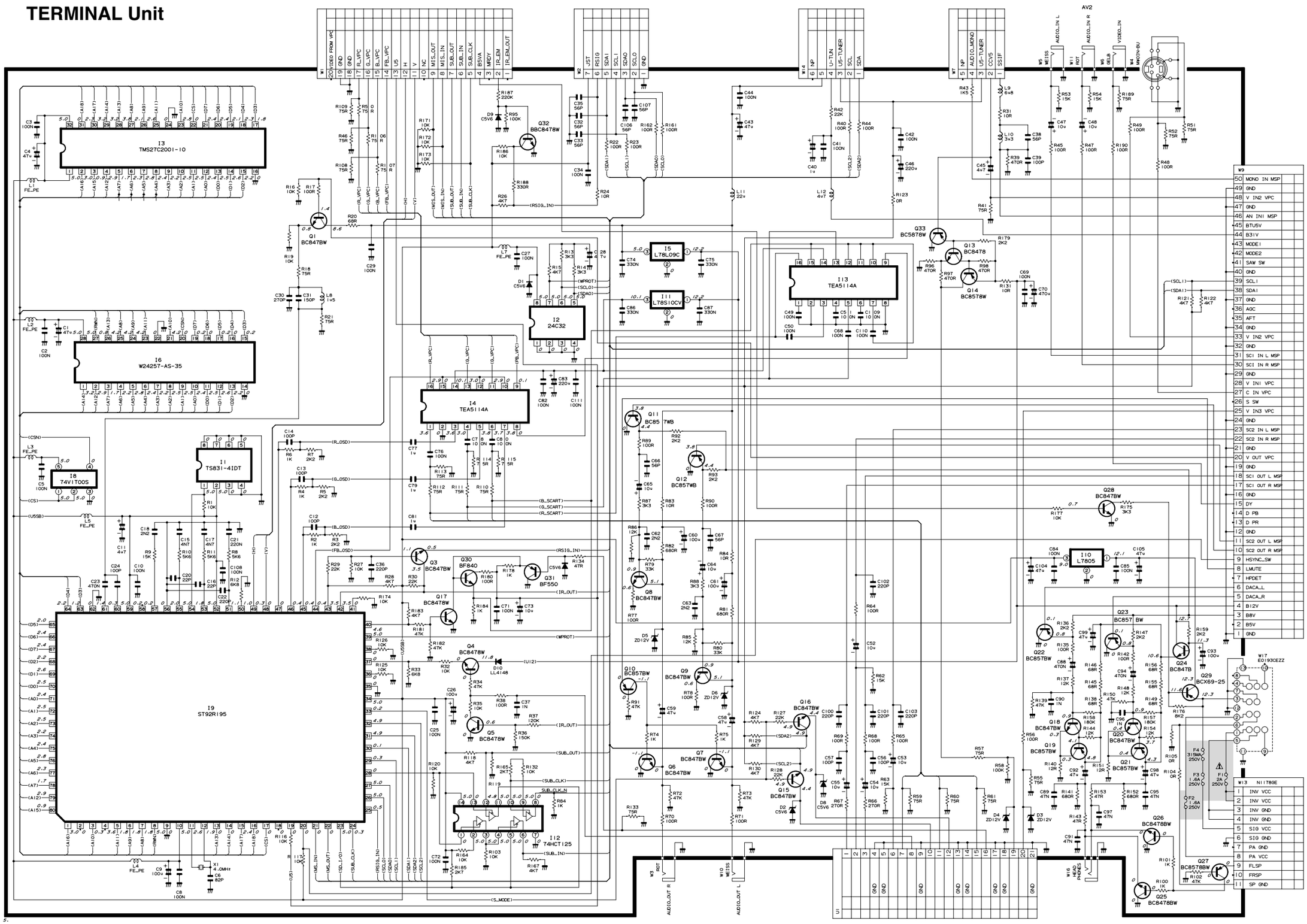
MAIN Unit -1/2


MAIN1
SC401 N0464FJ
MONOS
GND
TV V
SIF
BTU5V
B31V
MODE1
MODE2
SAW SW
SCL1
SDA1
AGC
AFT
V1 V
V1 L
V1 R
V1 SY
V1 SC
S SW
V2 V
V2 L
V2 R
V2 VO
V2 LO
V2 RO
D Y
D PB
D PR
SC20UTL
SC20UTR
HPDET
LMUTE
HD_SELECT
DACAL
DACAR
B12V
B8V
B5V
P701 N1178GE
INV VCC
INV GND
SIG VCC
SIG GND
PAGND
PAVCC
FLSP
FRSP
SPGND
P2003 N0520RE
KEY2
KEY1
POW1
POW2
GND
P2004 N0420RE
POW
B5Va
IREM
P304 N0278GE
FLSP
PA GND
P305 N0278GE
FRSP
P301 N0278GE
SP
P2002 N1320RE
IREM OUT
DAC1CS
MPCLK
MPDA
MPCS
MPRDA
MPRCS
SCL1
SDA1
MRDY
IREM
B5Va
IC901 IX3371CE
IC902 NJM4560M
IC903 NJM4560M
IC303 NJM2283F
IC301 LA4227
IC302 LA4227
IC2007 TC4W53U
IC2006 TC7W04U
IC2005 BA7046F
IC2001 IX3483CE
IC2002 PST529DM
IC2004 BR24C08F
IC402 NJM2235M
IC701 AN8005M
+5V REG
IC702 NJM2377M
IC704 BA033FP
IC201 NJM2147M
T701 Z0778CE
X901 18.432MHz B0250GE
X2002 A0107CE
Q302 A1162Y
Q303 C314TK
Q304 C314TK
Q305 C314TK
Q308 C144EE
Q2005 A144EE
Q2006 C144EE
Q2004 C144EE
Q2003 C2712Y
Q710 A1162Y
Q701 A1162Y
Q708 FMMT718
Q709 C144EE
Q707 C144EE
Q702 K2503
Q703 C2712Y
Q204 C2712Y
Q201 C2712Y
Q202 C2712Y
Q203 FMY3
TO MAIN2
B9V200MA
B12VINV2A
INVGND2A
V2VO
AV1
AV2
SY
SC
DVD_Y
DACICS
MPCS
MPCLK
MPDA
MPRDA
MPRCS
OSDHD
OSDVD
OSDR
OSDG
OSDB
OSDBLK
HSY2
HSY
DDCRESET
M/S_OUT
M/S_IN
OSDCK
SCL1
SDA1
B12V1A
B-8V1A
B3.3V200MA
B5V500MA
B29V10MA
B14V10MA
+BADJ
VIDEO
SUBCLK
SUBDIN
SUBDOUT
L_ERR
IREM
B5VA
MRDY
M-RST
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

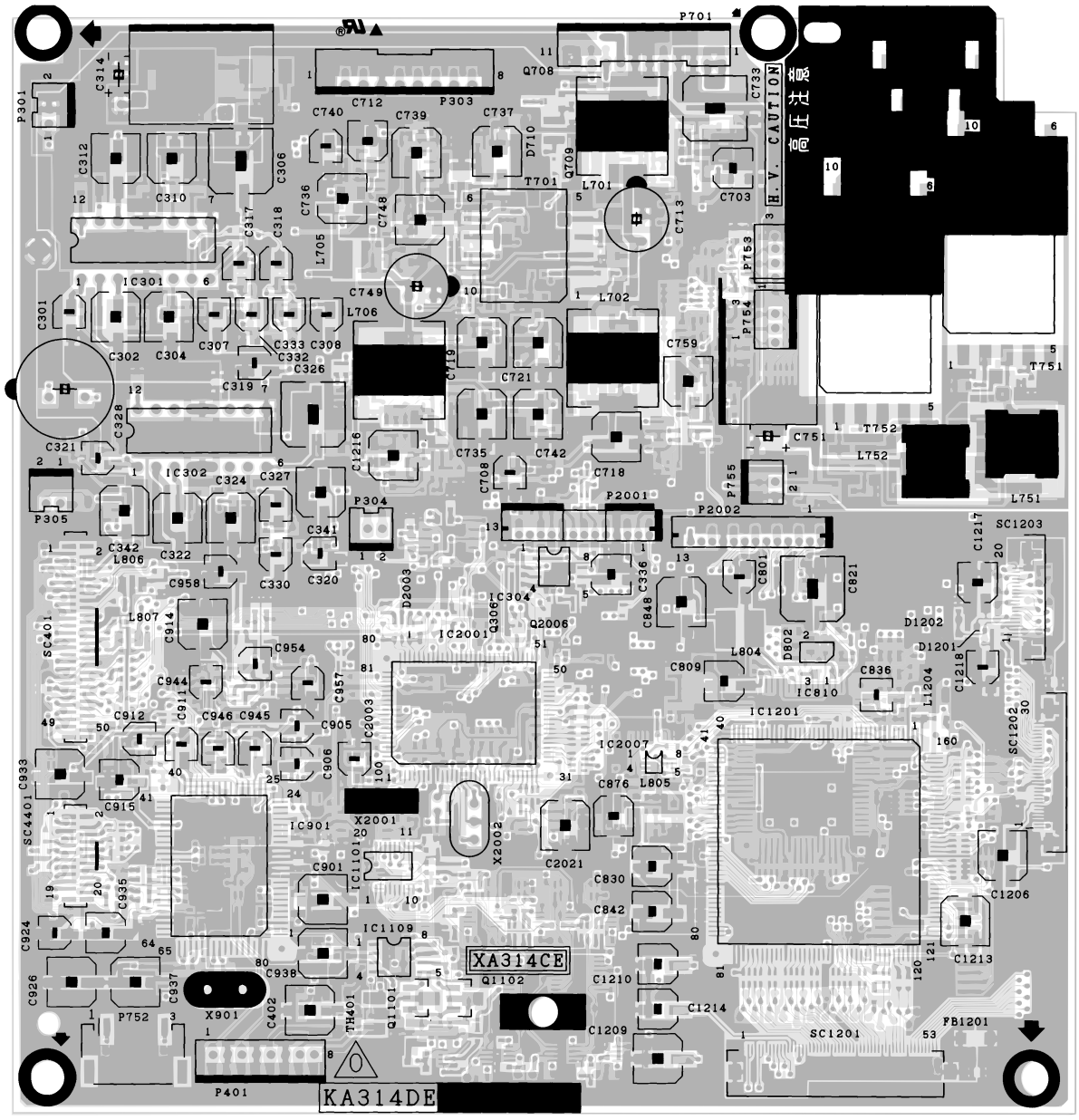
MAIN Unit -2/2


MAIN2
T751 Z0777CE
T752 Z0777CE
P751 N0155FJ
P752 N0155FJ
Q751 FZT1053A
Q752 FZT1053A
Q753 A1162Y
Q754 C114YE
Q757 UPA606T
D753 IMN10
D754 IMN10
IC1101 MB8346BV
IC1102 NJM4565V
IC1103 NJM4565V
IC1104 NJM4565V
IC1105 BU4053V
IC1110 BU4053V
IC1106 NJM4580V
IC1107 NJM4580V
IC1108 NJM4580V
IC1109 NJM353M
Q1101 A1729
Q1102 C4520
D1101 1SS250
IC802 VPC3230D
IC1201 IX3378CE
IC1202 PD485505
Q1201 C144EE
SC4401 N0487FJ
SC1201 N0461FJ
SC1203 N0199FJ
TO MAIN1
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

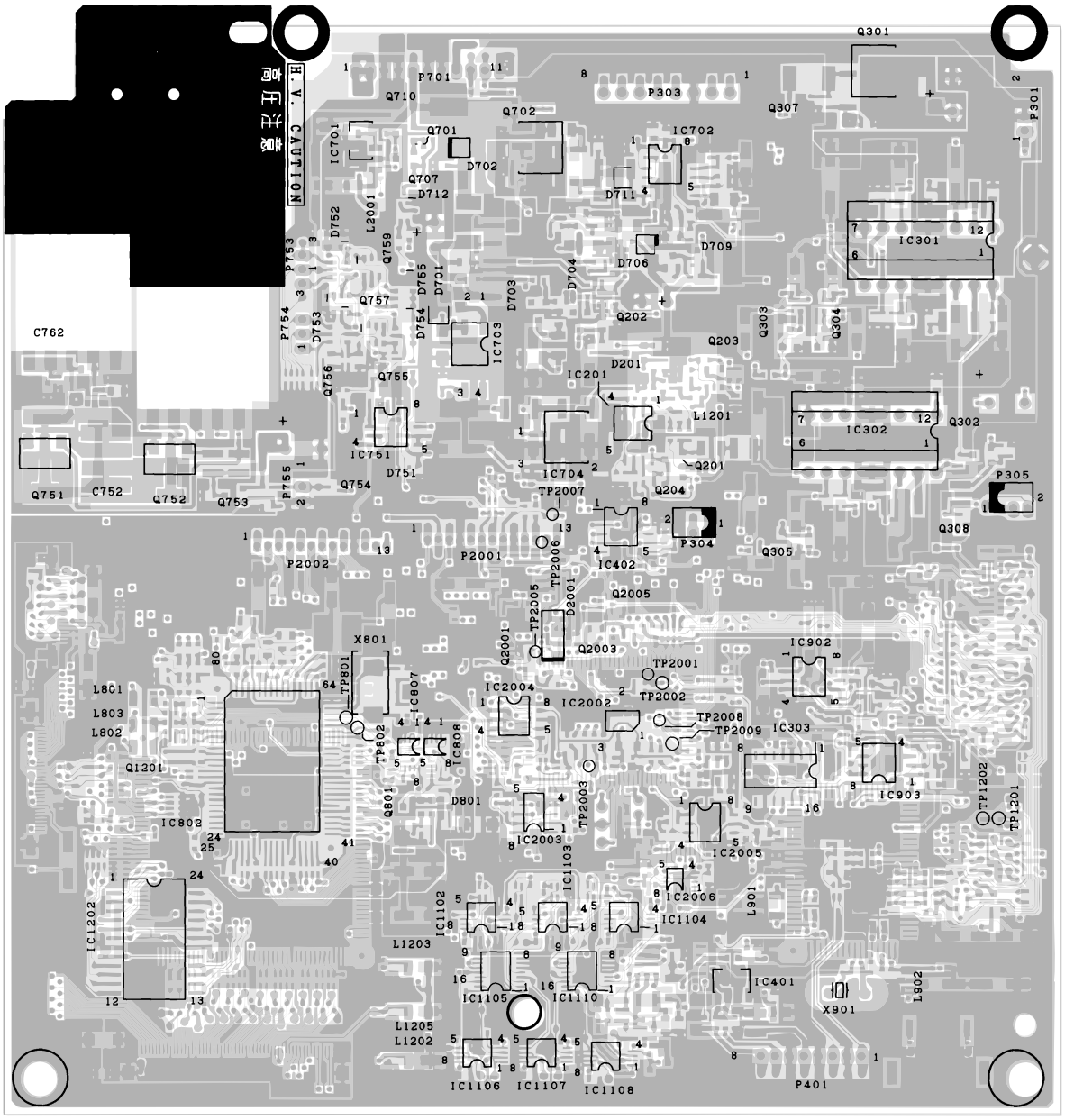
TERMINAL Unit



PRINTED WIRING BOARD ASSEMBLIES

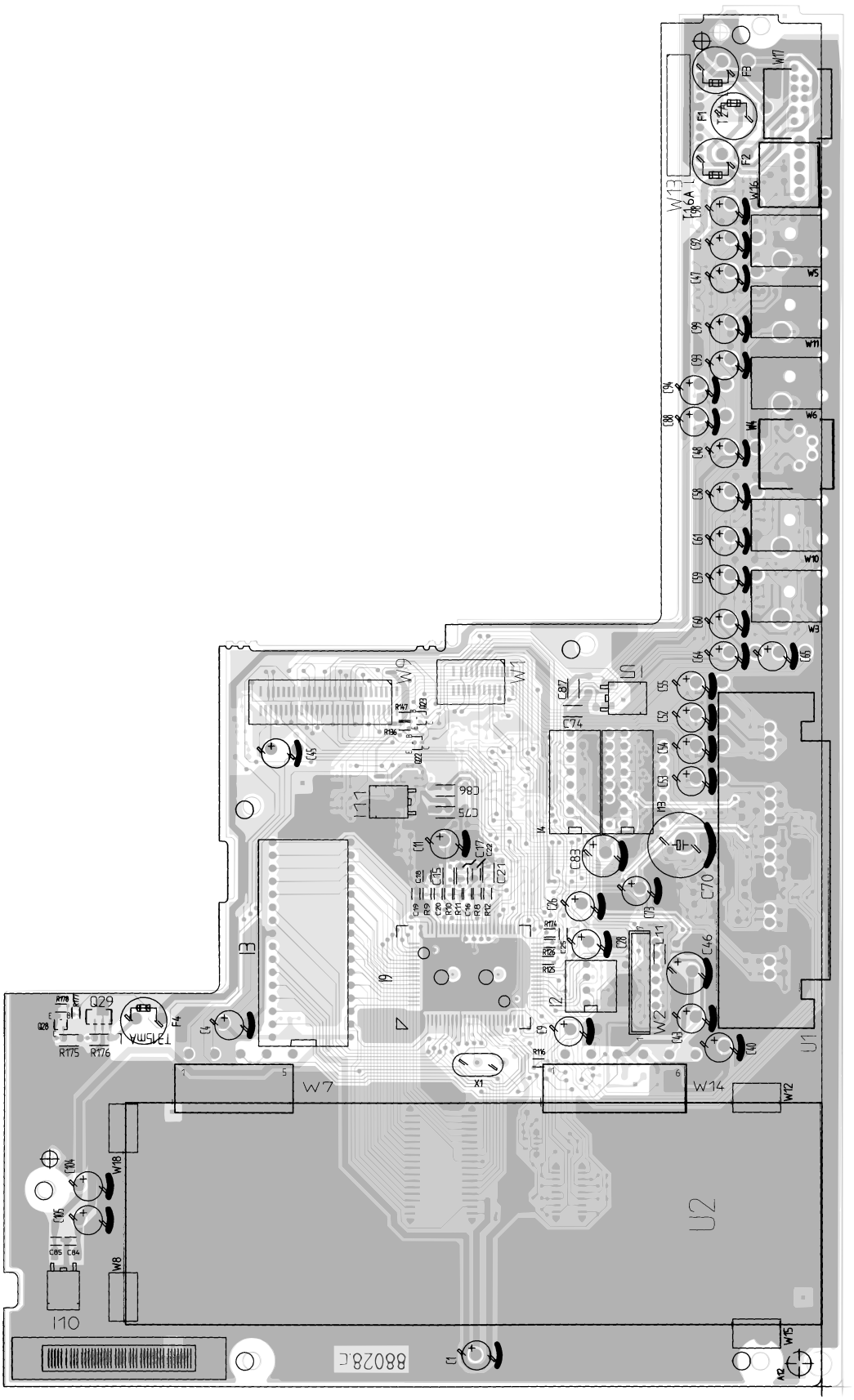


MAIN Unit (Side-A)

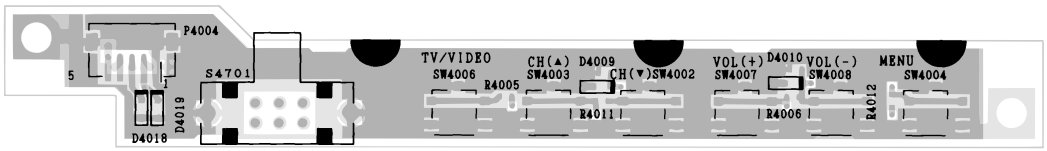


MAIN Unit (Side-B)

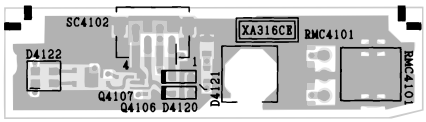
TERMINAL Unit (Side-A)



TERMINAL Unit (Side-B)

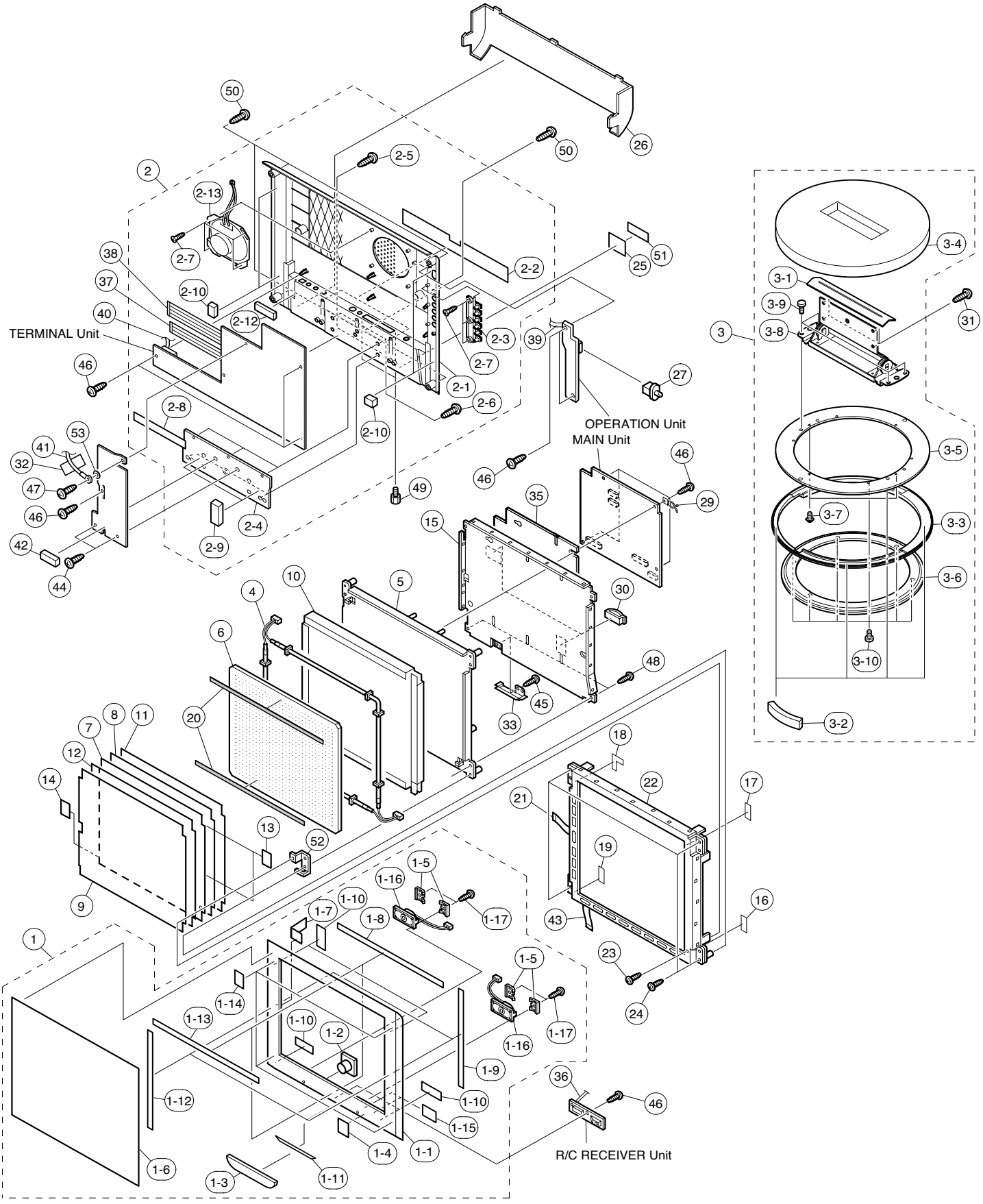


OPERATION Unit (Wiring Side)

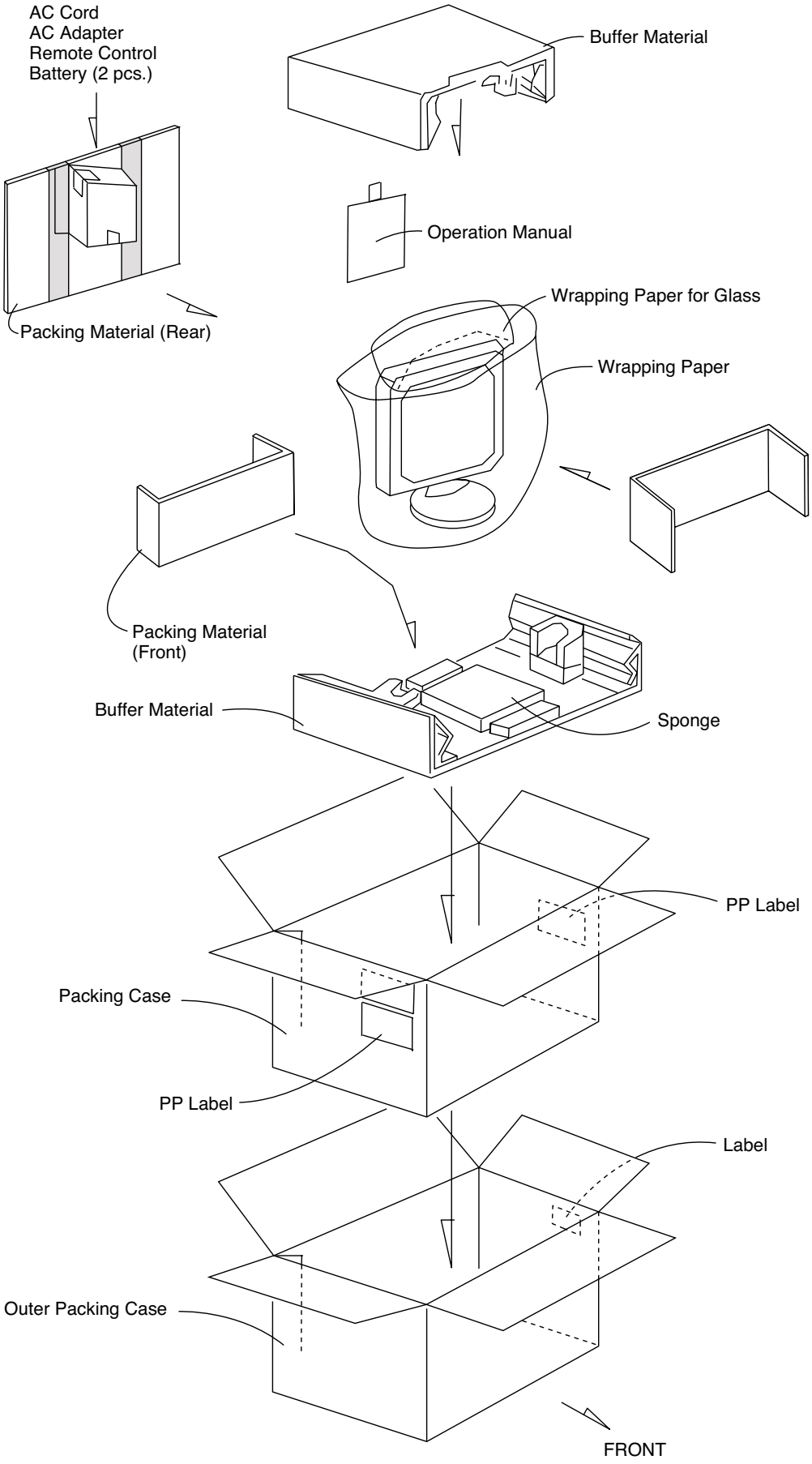


R/C RECEIVER Unit (Wiring Side)

CABNET AND MECHANICAL PARTS



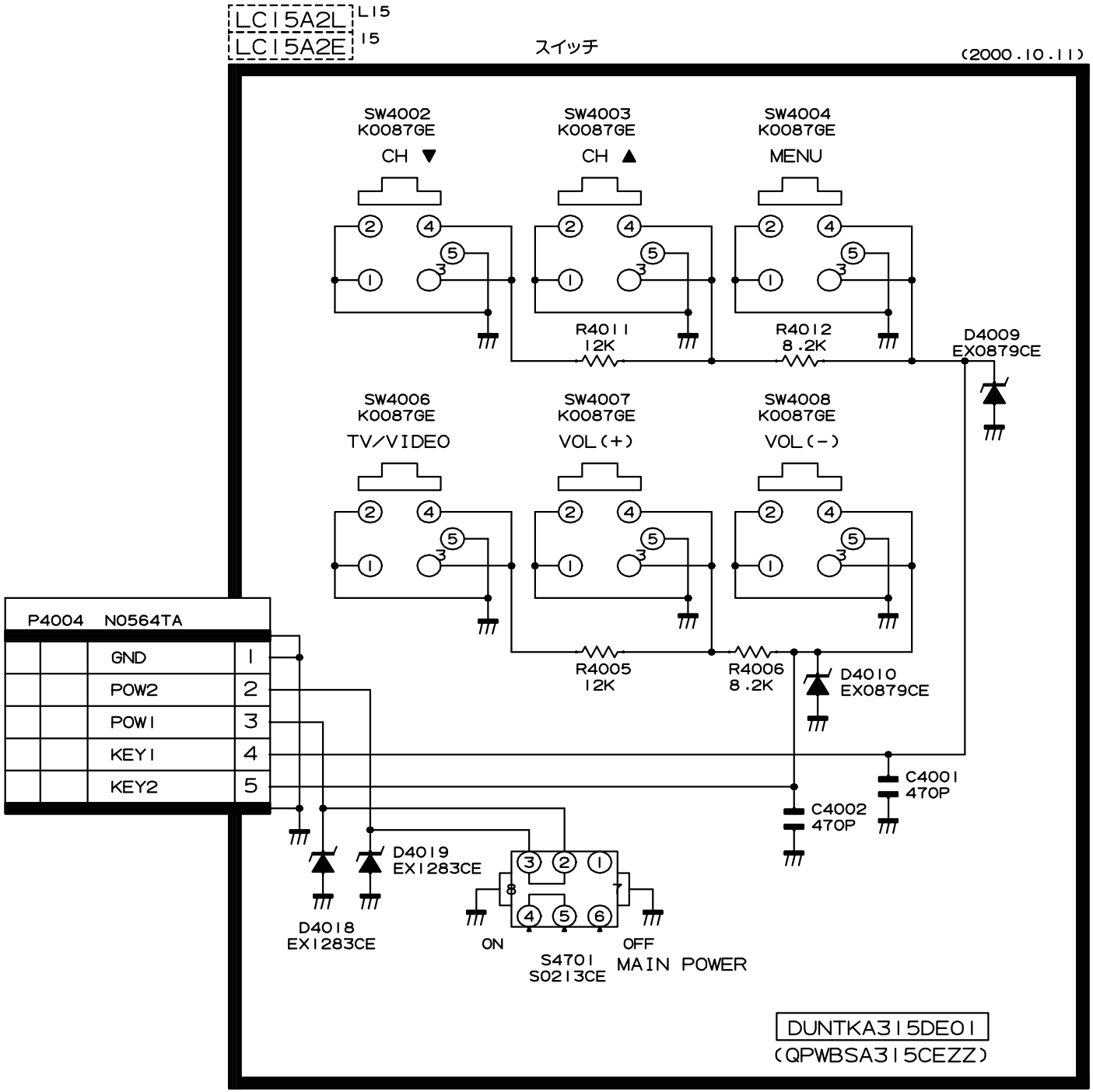
PACKING OF THE SET



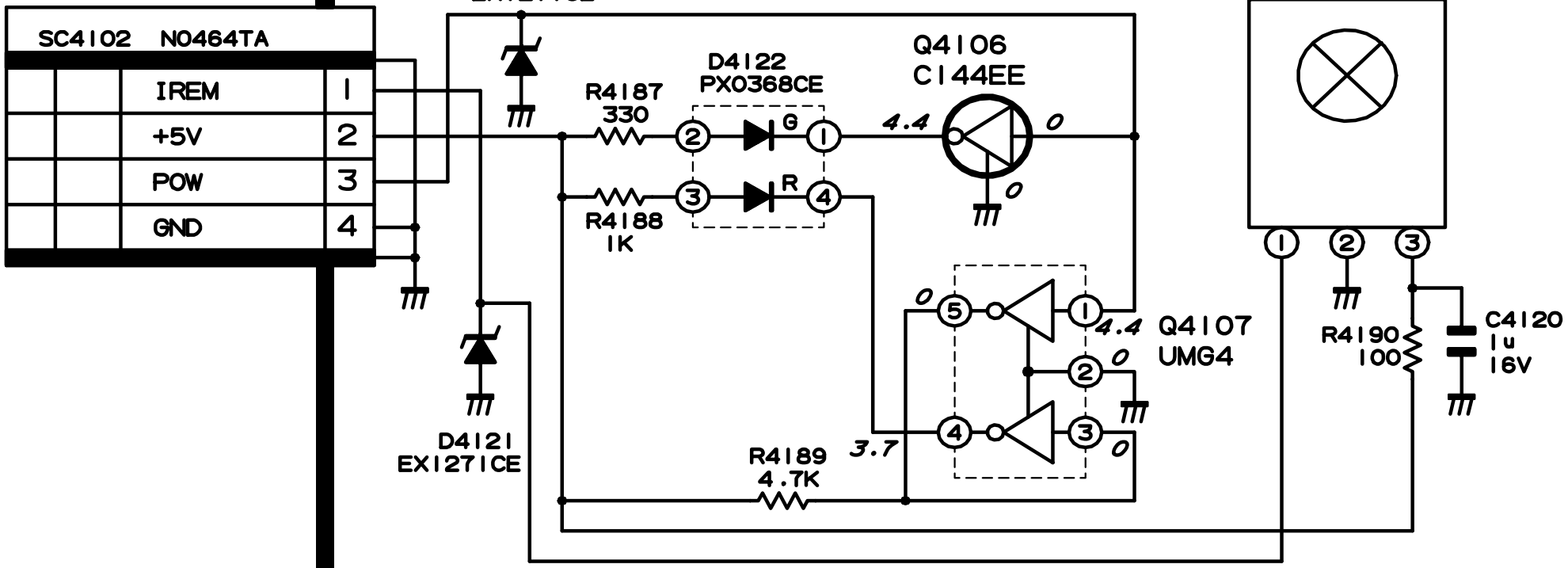
LC15A2L L15
LC15A2E 15

スイッチ

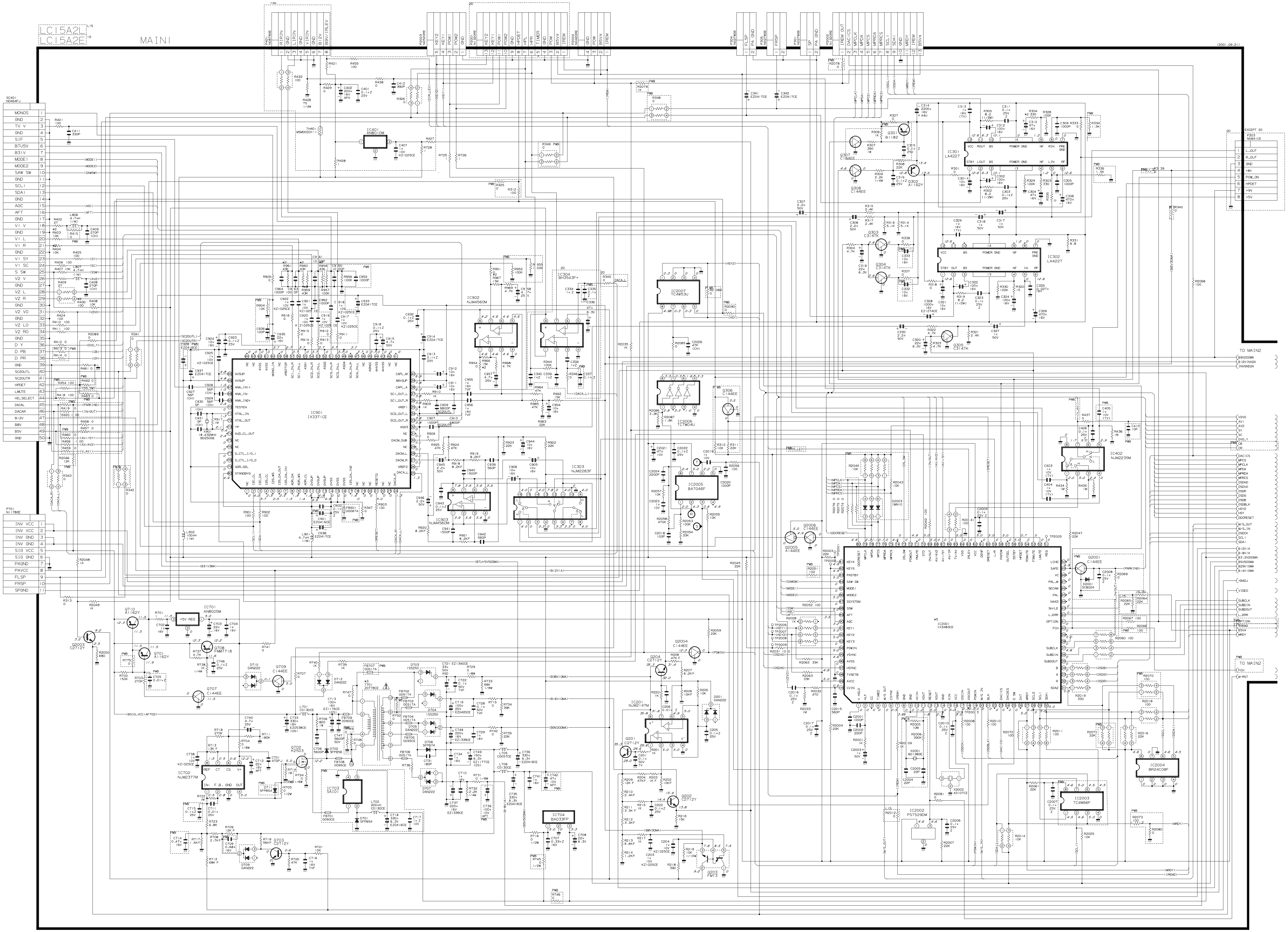
(2000.10.11)



LC15A2L
LC15A2E
LC20A2E
R/C基板
(2000.10.11)



DUNTKA316DE01
(QPWBSA316CEZZ)



LC15A2L
LC15A2E
MAIN1
(2001.09.21)
SC401 N0464FJ
MONOS
GND
TV V
SIF
BTU5V
B31V
MODE1
MODE2
SAW SW
SCL1
SDA1
AGC
AFT
V1 V
V1 L
V1 R
V1 SY
V1 SC
S SW
V2 V
V2 L
V2 R
V2 VO
V2 LO
V2 RO
D Y
D PB
D PR
SC2OUTL
SC2OUTR
HPDET
LMUTE
HD_SELECT
DACAL
DACAR
B12V
B8V
B5V
P701 N1178OE
INV VCC
INV GND
SIG VCC
SIG GND
PAGND
PAVCC
FLSP
FRSP
SPGND
P401 N0878GE
RIRIN
LIRIN
VIRIN
B12V
B9V/IRLEV
P2003 N0520RE
KEY2
KEY1
POW1
POW2
P2001 N1320RE
HPDET
HPL
HPR
TIMER
POW
B5Va
IREM
P2004 N0420RE
P304 N0278GE
FLSP
PA GND
P305 N0278GE
FRSP
P301 N0278GE
SP
P2002 N1320RE
IREM OUT
DAC1CS
MPCLK
MPDA
MPCS
MPRDA
MPRCS
SCL1
SDA1
MRDY
P303 N0841CE
L_OUT
R_OUT
+8V
POW_ON
HPDET
+9V
+5V
EXCEPT 20
IC401 AN8010M
IC901 IX3371CE
IC902 NJM4560M
IC903 NJM4560M
IC303 NJM2283F
IC304 BH3543F+
IC301 LA4227
IC302 LA4227
IC2007 TC4W53U
IC2006 TC7W04U
IC2005 BA7046F
IC402 NJM2235M
IC2001 IX3483CE
IC2002 PST529DM
IC2003 TC4W66F
IC2004 BR24C08F
IC701 AN8005M
+5V REG
IC702 NJM2377M
IC703 SA101
IC704 BA033FP
IC201 NJM2147M
T701 Z0778CE
X901 18.432MHz B0250GE
X2001 B0138GE
X2002 AD107CE
TO MAIN2
B9V200MA
B12V1NV2A
INVGND2A
V2VO
AV1
AV2
SY
SC
DVD_Y
CB
CR
DAC1CS
MPCS
MPCLK
MPDA
MPRDA
MPRCS
OSDHD
OSDVD
OSDR
OSDG
OSDB
OSDBLK
HSY2
HSY
DDCRESET
M/S_OUT
M/S_IN
OSDCK
SCL1
SDA1
B12V1A
B-8V1A
B3.3V200MA
B5V500MA
B29V10MA
B14V10MA
+BADJ
VIDEO
SUBCLK
SUBDIN
SUBDOUT
L_ERR
OPTION
IREM2
B5VA
MRDY
FCH
M-RST
(BTU+5V500MA)
(B12V1A)
(B31V3MA)
(B38V10MA)
(B16V10MA)
(B9V200MA)
(B8V30MA)
(B5V500MA)
(BSIG_VCC1AFT02)
(PSWIN)
(PARKING)

LC15A2E(LOEWE) MAIN2

(2001.05.23)

TO MAIN!

TO MAIN!

TO MAIN!

OPTION

(+15V)

(+5V)

(-15V)

(-5V)

(-8V)

(+8V)

(+3.3V)

(+5V500MA)

(+8V500MA)

(VD)

(VH)

(VS2)

(VS)

(VS4)

(VS3)

(CSCOM)

(B+5.5V)

(VCC)

(POWER)

(GCK)

(GSP)

(U/D)

(VDD)

(VCC)

(VSL)

(DGND)

(YOB18)

(YOB17)

(YOB16)

(YOB15)

(YOB14)

(YOB13)

(YOB12)

(YOB11)

(CSCOM)

(GCK)

(GSP)

(U/D)

(VDD)

(VCC)

(VSL)

(DGND)

(DGND)

IC801 VPC3230D

IC1201 IX3378CE

IC1202 PD485505

IC1203 TC4053J

IC1204 TC4052BF

IC1205 TC4052BF

IC1101 MB8346BV

IC1102 NJM4565V

IC1103 NJM4565V

IC1104 NJM4565V

IC1105 BU4053V

IC1106 NJM4580V

IC1107 NJM4580V

IC1108 NJM4580V

IC1109 NJM353M

IC1110 BU4053V

IC751 NJM4560M

IC807 TC7W74U

IC808 TC4W53U

IC810 PST3230CM

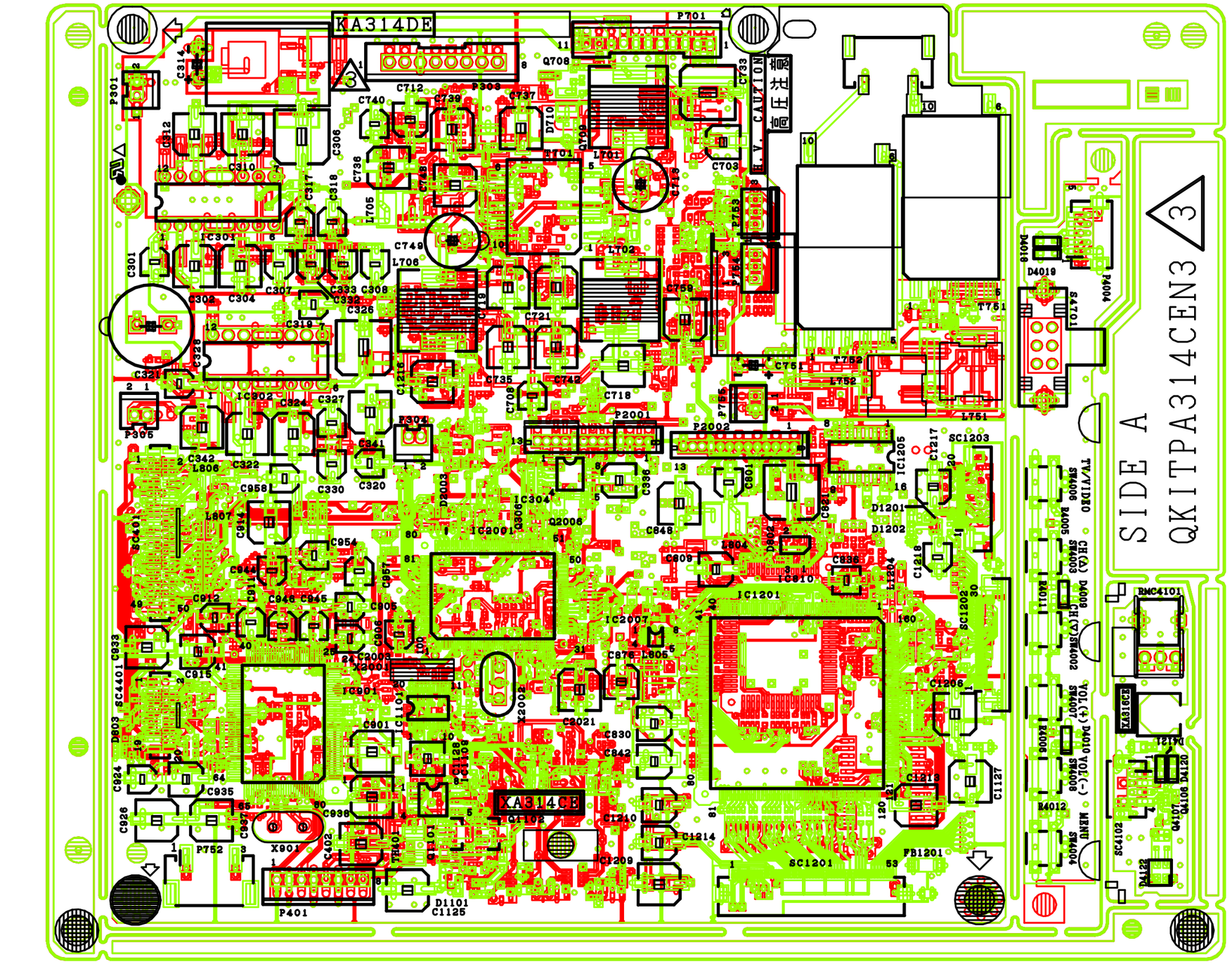
SC1202 ND205FJ

SC1203 ND199FJ

SC4401 XD488FU

SC1201 HD481FJ

QKITPA314CEN3 A面シルク（A面視）



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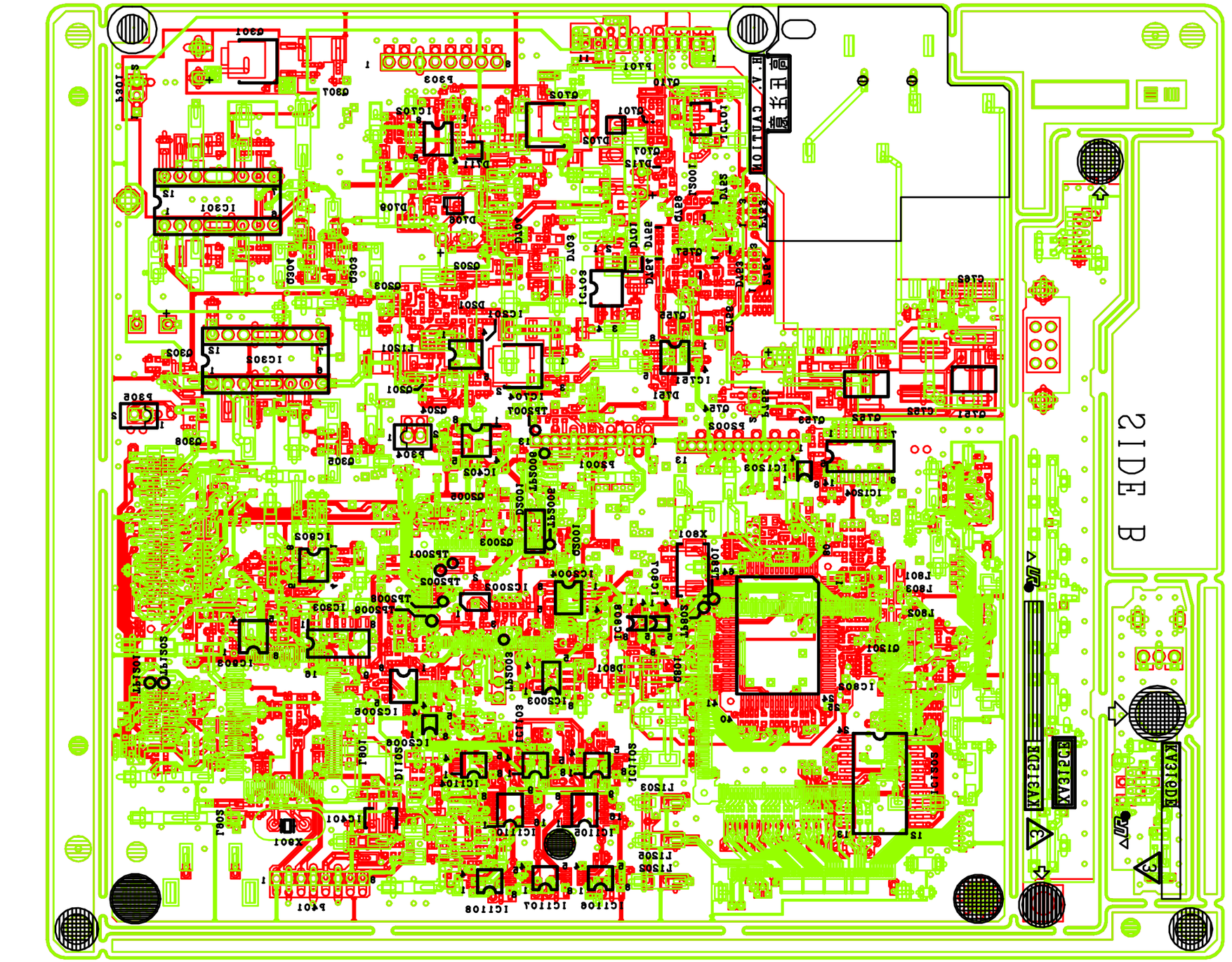
Time: 17:19 04-feb-2002 Factor: 1.0 Comment: a314s3 s1 fukamizu

QKITPA314CEN3 B面シルク（A面視）



Node: t141 User: eg1 Directory: /cad/eg1/layout-v2/lc15a2e/ka314s3/layout File: gaia314.pld

Time: 17:19 04-feb-2002 Factor: 1.0 Comment: a314s3 s6 fukamizu

LC15A2L
LC15A2E
LC20A2E

TUNER

AV2

I3 TMS27C2001-10
I7
I6 W24257-AS-35
I9 ST92R195
I4 TEA5114A
I13 TEA5114A
I2 24C32
I1 TS831-4IDT
I8 74VHT00S
I12 74HCT125
I5 L78L09C
I11 L78S10CV
I10 L7805
Q1 BC847BW
Q2 BBC8478W
Q32 BBC8478W
Q3 BC847BW
Q4 BC847BW
Q5 BC847BW
Q6 BC847BW
Q7 BC847BW
Q8 BC847BW
Q9 BC847BW
Q10 BC857BW
Q11 BC857WB
Q12 BC857WB
Q15 BC847BW
Q16 BC847BW
Q30 BF840
Q31 BF550
Q33 BC5878W
Q13 BC8478
Q14 BC8578W
Q22 BC857BW
Q23 BC857BW
Q24 BC847B
Q29 BCX69-25
Q18 BC847BW
Q19 BC857BW
Q20 BC847BW
Q21 BC857BW
Q26 BC8478BW
Q27 BC8578BW
Q28 BC847BW
Q25 BC8478BW
D1 C5V6
D2 C5V6
D3 ZD12V
D4 ZD12V
D5 ZD12V
D6 ZD12V
D8 C5V6
D9 C5V6
D10 LL4148
Q31 BF550
W1 20V VIDEO FROM VPC · GND · GND · R_VPC · G_VPC · B_VPC · FB_VPC · U5 · H · V · NC · MIS_OUT · MIS_IN · SUB_OUT · SUB_IN · SUB_CLK · B8VA · MRDY · IR_EM · IR_EM_OUT
W2 JST · RSIG · SDA1 · SCL1 · SDAO · SCLO · GND
W14 NP · U-TUN · U5-TUNER · SCL · SDA
W7 NP · AUDIO_MONO · U5-TUNER · CCVS · SSIF
W5 WEISS · AUDIO_IN L
W11 ROT · AUDIO_IN R
W6 GELB · VIDEO_IN
W4 WHOIN-BU
W9
50 MONO IN MSP
49 GND
48 V IN2 VPC
47 GND
46 AN IN1 MSP
45 BTU5V
44 B31V
43 MODE1
42 MODE2
41 SAW SW
40 GND
39 SCL1
38 SDA1
37 GND
36 AGC
35 AFT
34 GND
33 V IN2 VPC
32 GND
31 SC1 IN L MSP
30 SC1 IN R MSP
29 GND
28 V IN1 VPC
27 C IN VPC
26 S SW
25 V IN3 VPC
24 GND
23 SC2 IN L MSP
22 SC2 IN R MSP
21 GND
20 V OUT VPC
19 GND
18 SC1 OUT L MSP
17 SC1 OUT R MSP
16 GND
15 DY
14 D PB
13 D PR
12 GND
11 SC2 OUT L MSP
10 SC2 OUT R MSP
9 HSYNC_SW
8 LMUTE
7 HPDET
6 DACA_L
5 DACA_R
4 B12V
3 B8V
2 B5V
1 GND
W17 E0193CEZZ
W13 N11780E
1 INV VCC
2 INV VCC
3 INV GND
4 INV GND
5 SIG VCC
6 SIG GND
7 PA GND
8 PA VCC
9 FLSP
10 FRSP
11 SP GND
W3 ROT AUDIO_OUT R
W10 WEISS AUDIO_OUT L
W16 HEAD PHONES
U1 GND GND GND GND GND GND GND GND GND GND GND
F1 2A 250V
F2 1.6A 250V
F3 1.6A 250V
F4 315MA 250V
L1 FE_PE
L2 4u7
L3 FE_PE
L4 FE_PE
L5 FE_PE
L7 FE_PE
L8 1u5
L9 6u8
L10 3u3
L11 22u
L12 4u7
L13 10u
XI 4.00MHz
(R_VPC) (G_VPC) (B_VPC) (FB_VPC) (H) (V) (MIS_OUT) (MIS_IN) (SUB_OUT) (SUB_IN) (SUB_CLK) (RSIG_IN) (IR_OUT) (WPROT) (SCLO) (SDAO) (SDA1) (SCL1) (U12) (U5B) (U5) (CSN) (CS) (S_MODE) (R_OSD) (G_OSD) (B_OSD) (FB_OSD) (R_SCART) (G_SCART) (B_SCART) (SUB_IN) (SUB_CLK_N) (SDA2) (SCL2)